

SAMSUNG

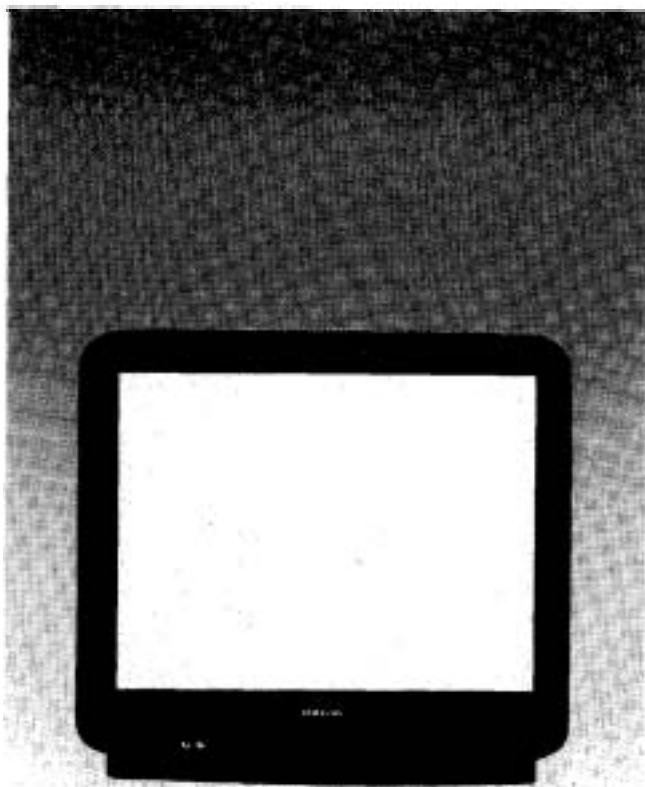
COLOR TELEVISION RECEIVER

CHASSIS: SCT11D

MODEL: CB-3373Z

SERVICE *Manual*

COLOR TELEVISION RECEIVER



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1. Precautions

Follow these safety, servicing and ESD precautions to prevent damage and protect against potential hazards such as electrical shock and X-rays.

1-1 Safety Precautions

1. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.
2. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including: nonmetallic control knobs and compartment covers.
3. Make sure that there are no cabinet openings through which people--particularly children--might insert fingers and contact dangerous voltages. Such openings include the spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted back covers.

If the measured resistance is less than 1.0 megohm or greater than 5.2 megohms, an abnormality exists that must be corrected before the unit is returned to the customer.

4. Leakage Current Hot Check (Figure 1-1):
Warning: Do not use an isolation transformer during this test. Use a leakage-current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, *Leakage Current for Appliances*), and Underwriters Laboratories (UL Publication UL1410, 59.7).
5. With the unit completely reassembled, plug the AC line cord directly into the power outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

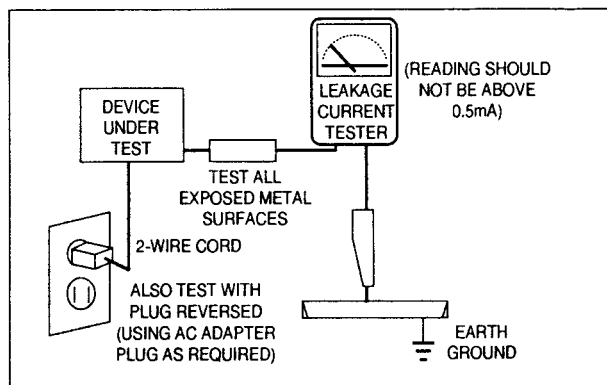


Fig. 1-1 AC Leakage Test

6. Antenna Cold Check:
With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of the ohmmeter to an AC prong. Connect the other lead to the coaxial connector.
7. X-ray Limits:
The picture tube is especially designed to prohibit X-ray emissions. To ensure continued X-ray protection, replace the picture tube only with one that is the same type as the original. Carefully reinstall the picture tube shields and mounting hardware; these also provide X-ray protection.
8. High Voltage Limits:
High voltage must be measured each time servicing is done on the B+, horizontal deflection or high voltage circuits. Correct operation of the X-ray protection circuits must be reconfirmed whenever they are serviced. (X-ray protection circuits also may be called "horizontal disable" or "hold-down".)

Heed the high voltage limits. These include the *X-ray Protection Specifications Label*, and the *Product Safety and X-ray Warning Note* on the service data schematic.

1-1 Safety Precautions (Continued)

9. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.
10. Design Alteration Warning:
Never alter or add to the mechanical or electrical design of this unit. Example: Do not add auxiliary audio or video connectors. Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.
11. Hot Chassis Warning:
Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord. If an isolation transformer is not used, these units may be safely serviced only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC source.

To confirm that the AC power plug is inserted correctly, do the following: Using an AC voltmeter, measure the voltage between the chassis and a known earth ground. If the reading is greater than 1.0V, remove the AC power plug, reverse its polarity and reinsert. Re-measure the voltage between the chassis and ground.
12. Some TV chassis are designed to operate with 85 volts AC between chassis and ground, *regardless of the AC plug polarity*. These units can be safely serviced *only* if an isolation transformer is inserted between the receiver and the power source.
13. Some TV chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.
14. Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of damage or overheating, and correct any potential hazards.
15. Observe the original lead dress, especially near the following areas: Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.
16. Picture Tube Implosion Warning:
The picture tube in this receiver employs "integral implosion" protection. To ensure continued implosion protection, make sure that the replacement picture tube is the same as the original.
17. Do not remove, install or handle the picture tube without first putting on shatterproof goggles equipped with side shields. Never handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; do not try to remove such "permanently attached" yokes from the picture tube.
18. Product Safety Notice:
Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original—even if the replacement is rated for higher voltage, wattage, etc.

Components that are critical for safety are indicated in the circuit diagram by shading, () or (). Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

1-2 Servicing Precautions

WARNING1: First read the "Safety Precautions" section of this manual. If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precautions.

WARNING2: An electrolytic capacitor installed with the wrong polarity might explode.

1. Servicing precautions are printed on the cabinet. Follow them.
2. Always unplug the unit's AC power cord from the AC power source before attempting to: (a) Remove or reinstall any component or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.
3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.
5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of the AC plug.

The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.
8. Always connect a test instrument's ground lead to the instrument chassis ground *before* connecting the positive lead; always remove the instrument's ground lead last.

1-3 Precautions for Electrostatically Sensitive Devices (ESDs)

1. Some semiconductor ("solid state") devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs); examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.
2. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. (Be sure to remove it prior to applying power--this is an electric shock precaution.)
3. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.
4. Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDs.
5. Use only a grounded-tip soldering iron when soldering or unsoldering ESDs.
6. Use only an anti-static solder removal device. Many solder removal devices are not rated as "anti-static"; these can accumulate sufficient electrical charge to damage ESDs.
7. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
8. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
9. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting a foot from a carpeted floor can generate enough static electricity to damage an ESD.

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2. Specifications and IC Data

2-1 Specifications

Television System:

MODEL	SYSTEM
CI	PAL-I (UHF)
CII	PAL-I (VHF/UHF)
CX	PAL-B/G, SECAM-B/G
CK	PAL-B/G, D/K, SECAM-B/G, D/K
CW	PAL-B/G, D/K, SECAM-B/G, D/K, NT 4.43
CS	PAL-B/G, D/K, SECAM-B/G, D/K, NT 3.58/4.43

Channels:

System Band	PAL/SECAM-B/G, I	PAL, SECAM-D/K	SECAM-K1, PAL-D	NTSC-M
VHF	2 - 12	1 - 13	2 - 9	2 - 13
UHF	21 - 69	21 - 69	13 - 57	14-69

Intermediate Frequencies (MHz) :

SYSTEM IF Carrier Frequency	PAL/SECAM-B/G	PAL/SECAM-D/K, SECAM-K1	PAL-I	NTSC-M
Picture IF Carrier	38.90	38.90	38.90	38.90
Sound IF Carrier	33.40	32.40	32.90	34.40
Color Sub Carrier	34.47	34.47	34.47	35.32

Picture Tube:

14 Inch	A34KQV42X	Quick start, in-line-gun, Black stripe, 90° degree deflection
20 Inch	A48KRD82X	
21 Inch	A51KQJ63X	

Power Requirements:

AC 160~260V, 50Hz (Option : AC100 ~ 260V, 50/60Hz)

Antenna Input Impedance:

VHF, UHF : Telescopic dipole antenna (75 ohm unbalanced type)

Speaker Impedance

8 ohm, 4W+4W (Dual type)

16 ohm, 3W (Monitor type)

2-2 IC Line Up

Table 2-1 IC Line-Up			
Loc. No	Specification	Description	Remark
HC101	PAP102	IF Pre-AMP	
HC801	HIS-0169C	Power Control IC	
IC201	M52777SPA	PAL/NTSC Decoder (VIF/SIF/VIDEO, Chroma/Deflection)	MITSUBISHI
IC202	TDA4665	1H Delay	
IC203	TDA8395P	SECAM Decoder	
IC301	TA8356	Vertical Output	
IC501	TDA6103Q	R.G.B Drive AMP	
IC601	TDA7056	Sound Output Amplifier	3Wx1CH
IC602	TDA7057AQ	Sound Output Amplifier	4Wx2CH
IC801	SMR40200C	Power IC (STR) <Free Volt : SMR40000C>	220V/230V/240V
IC802	KA7630	Regulator (5V, 8V)	
IC804	KA7805	Regulator (5V)	
IC805	KA7812	Regulator (12V)	
IC901	SZM-137M3	μ-com (Without TTX) OSD Language English, French, German, Italian, Swedish, Spanish	ZILOG (NON TTX)
	SZM-139AV	μ-com (Without TTX) OSD Language English, Arabian	
	SZM-137M3	μ-com (Without TTX) OSD Language English, Russian, Hungarian, Polish, Rumanian, Czech, Croatian	
	SZM-141TV	μ-com (Without TTX) OSD Language English, Thai, Vietnamese, Indonesian, Malay	
	SZM-145CV	μ-com (Without TTX) OSD Language English, Chinese	
	SPM-151SVB	μ-com (With TTX) OSD Language English, Italian, Swedish, Spanish	PHILIPS (TTX)
	SPM-153GVB	μ-com (With TTX) OSD Language English, French German, Dutch	
	SPM-161RVB	μ-com (With TTX) OSD Language English, Russian, Hungarian, Polish	
	SPM-165CVB	μ-com (With TTX) OSD Language English, Rumanian Czech, Croatian	
	SPM-163FVB	μ-com (With TTX) OSD Language English, German, French (SEAM-L)	
IC902	X24C04P	Non-Volatile Memory	E ² PROM
ICK01	TDA3845/TDA445B	SIF Detector	
ICL01	STV8225	AM SIF Circuit	SECAM-L

2-3 Semiconductor Base Diagrams

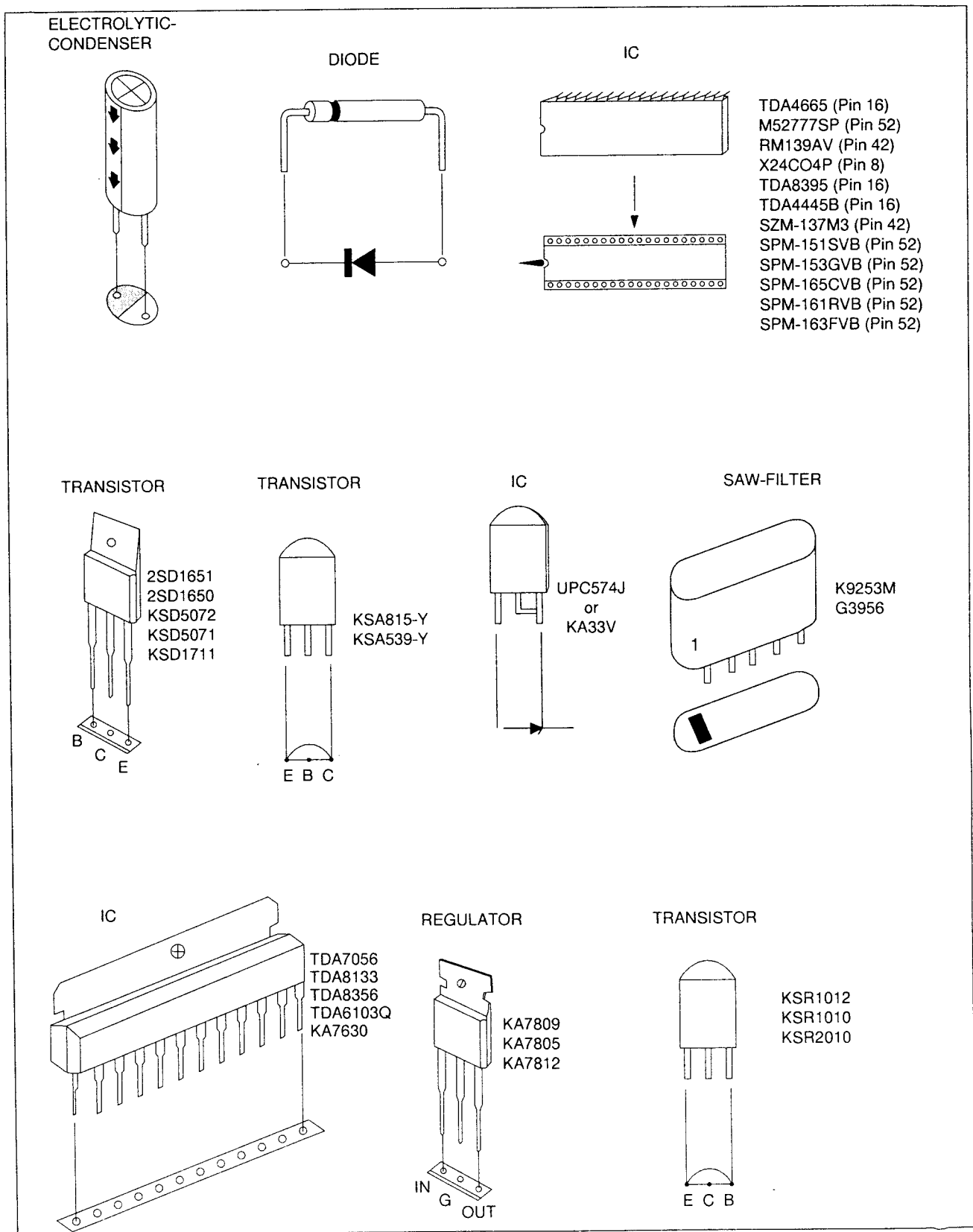
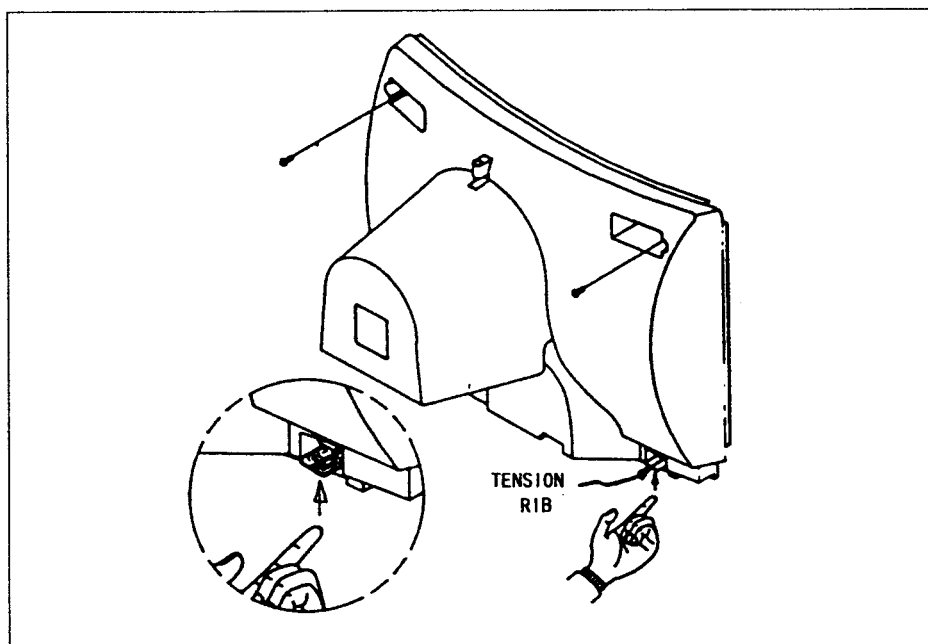


Fig.2-1 Semiconductor Base Diagrams

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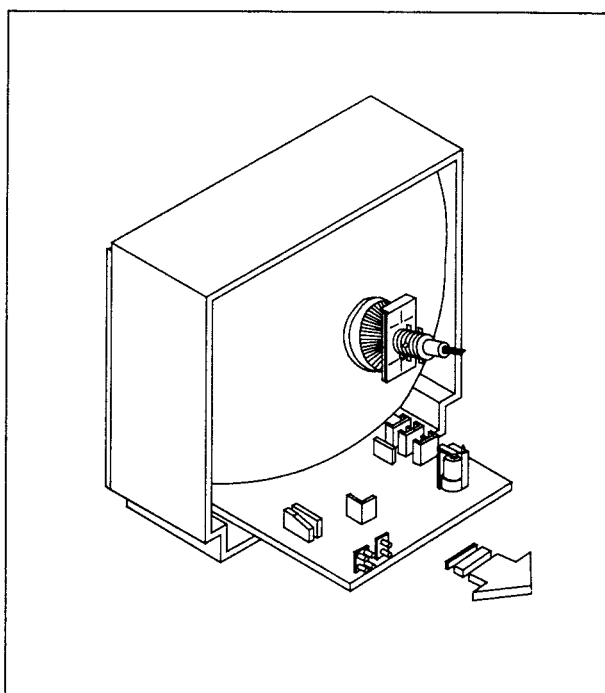
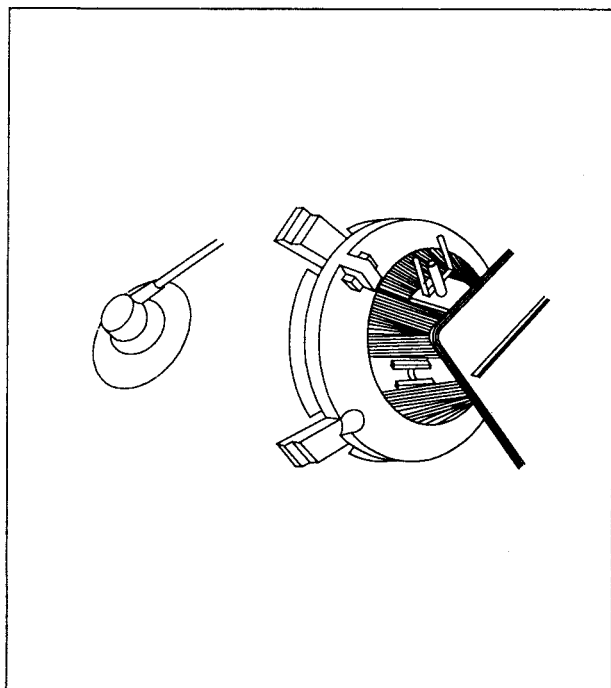
3. Disassembly and Reassembly

3-1 Back Cover Removal



1. After removing the screws, press the tension rib and pull the cabinet backwards.
2. To reassemble, press the tension rib (see diagram).

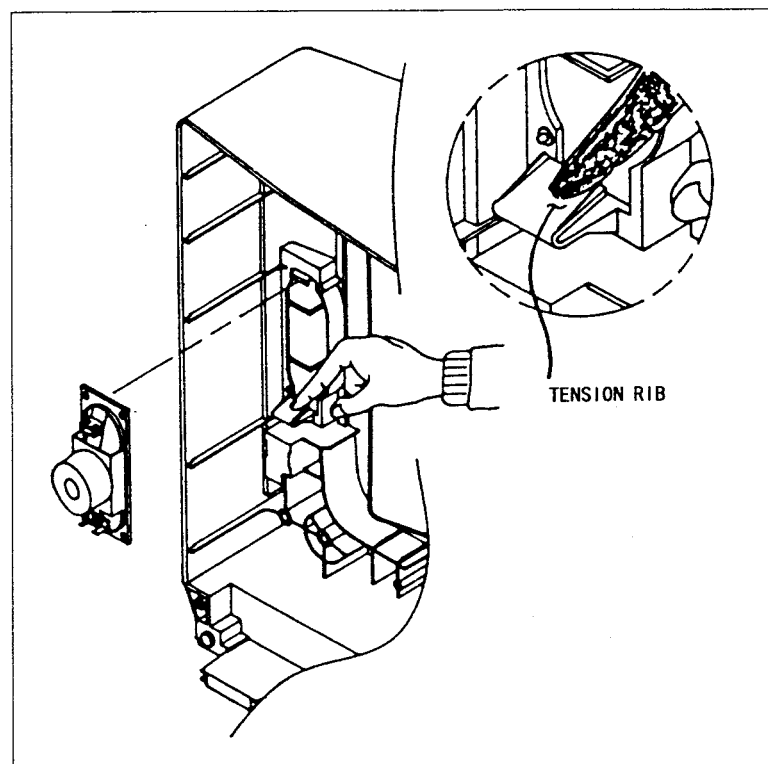
3-2 Main Board Removal



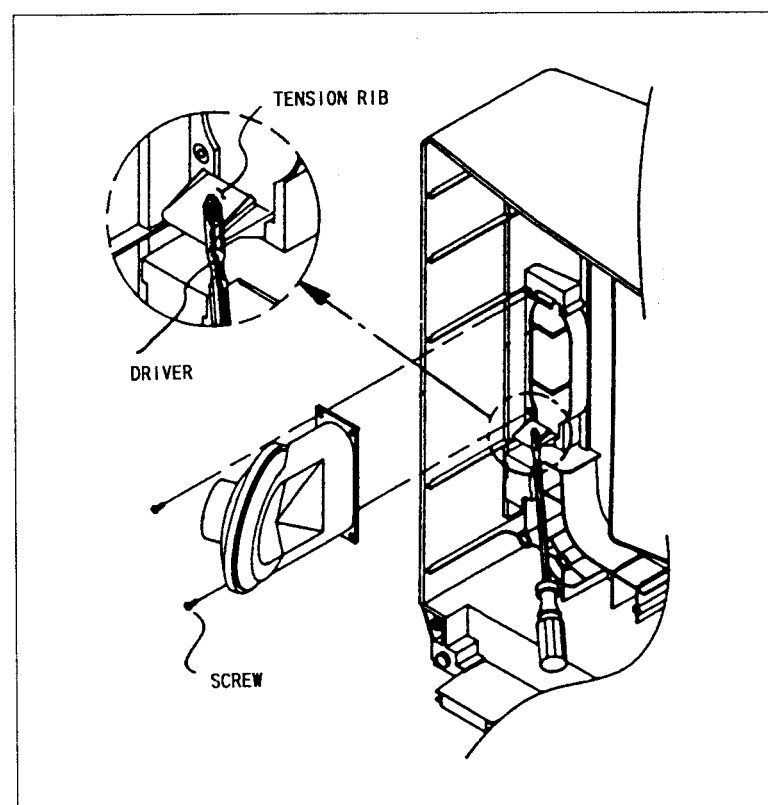
1. Separate the socket board from the CRT neck.
2. Remove the Anode Cap from the CRT.
3. Remove the main board by pulling it with both hands.

Warning: The FBT is charged with high voltage.
Before removing the Anode Cap, discharge the voltage
through one of the heat sinks on the main board.

3-3 Speaker Removal

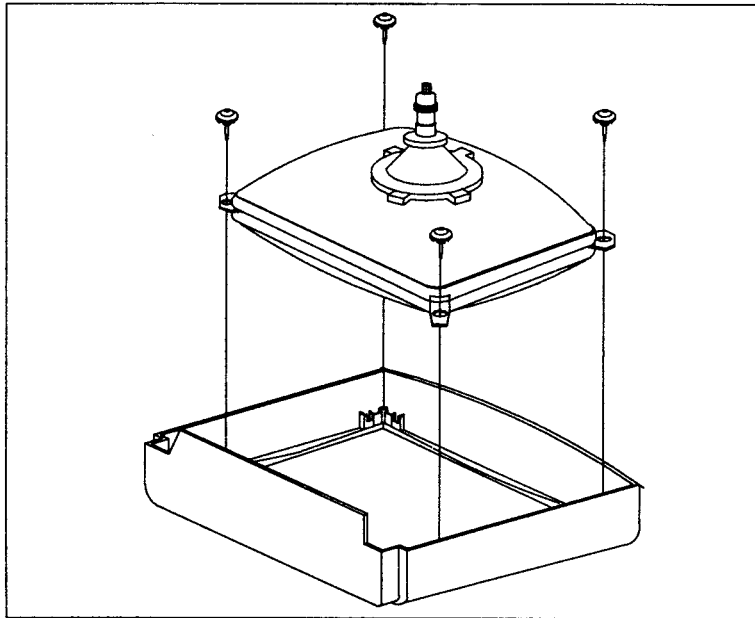


1. Remove the speaker by pressing the tension rib.



1. Remove the screws.
2. Remove the speaker by pressing the tension rib.

3-4 CRT Removal



1. Spread a soft mat on the floor. Place the TV set face down.
2. Remove the 4 nuts mounting the CRT to the front cabinet. Lift the CRT.
3. Caution: Because of the high vacuum and large surface area of the picture tube, be careful while handling it: (1) Always lift the picture tube by grasping it firmly around the faceplate, (2) Never lift the tube by its neck. (3) Do not scratch the picture tube or apply excessive pressure. Fractures of the glass may cause an implosion.

4. Alignment and Adjustment

4-1 Preadjustment

4-1-1 Factory Mode

1. Do not attempt these adjustments in the Video mode.
2. The Factory Mode adjustments are necessary when either the EEPROM (IC902) or the CRT is replaced.
3. Do not tamper with the "Adjustment" screen of the Factory Mode menu. This screen is intended only for factory use.

4-1-2 When EEPROM (IC902) Is Replaced

1. When IC902 is replaced all adjustment data revert to their initial values. It is necessary to re-program this data.
2. After IC902 is replaced, warm up the TV for 10 seconds

4-1-3 When CRT Is Replaced

1. Make the following adjustments AFTER setting up after setting up purity and convergence:

White Balance
Sub-Brightness
Vertical Center
Vertical Size
Horizontal Size

4-2 Factory/Service Mode

4-2-1 Procedure for the "Adjustment" Mode

1. This mode uses the standard remote control. The Service Mode is activated by (1) pressing the "HIDDEN" service key on the local-keyboard, or (2) by entering the following remote-control sequence:

STAND-BY → P.STD → HELP → SLEEP → POWER ON
2. The "SERVICE (FACTORY)" message will be displayed. The Service Mode has four components: Adjustment, Test Pattern, Option Bytes and Reset.
3. Access the Adjustment Mode by pressing the "VOLUME" keys (Up or Down). The adjustment parameters adjusted are listed in the accompanying table, and they are selected by pressing the CHANNEL keys (▲, ▼).

4. Selection sequences for the PAL system:

down or up key:
AGC>SBT>SCT>SCR>PDL>RC>GC>BC>RG>BG>PSL>PVS>PVA>PHS

5. Selection sequences for the NTSC system:

down or up key:
AGC>SBT>SCT>SCR>STT>NDL>RC>GC>BC>RG>BG>NSL>NVS>NVA>NHS

6. The VOLUME keys increase or decrease the adjustment values, which are stored in the non-volatile memory as soon as the Adjustment mode is cancelled.
7. Cancel the Adjustment Mode by repressing the "HIDDEN" key or the "status" key.

4-2-2 Main Adjustment Parameter

Table 4-1 Main Adjustment Parameter (Zilog μ -com) NON TTX			
FUNCTION	OSD ABBREVIATION	RANGE	INITIAL DATA
AUTO GAIN CONTROL	AGC	0 ~ 63 STEP	40
SUB BRIGHT	SBT	0 ~ 63 STEP	44
SUB CONTRAST	SCT	0 ~ 63 STEP	32
SUB COLOR	SCR	0 ~ 27 STEP	13
SUB TINT	STT	0 ~ 27 STEP	13
PAL DELAY	PDL	0 ~ 7 STEP	2
NTSC DELAY	NDL	0 ~ 7 STEP	2
RED CUTOFF	RC	0 ~ 255 STEP	0
GREEN CUTOFF	GC	0 ~ 255 STEP	0
BLUE CUTOFF	BC	0 ~ 255 STEP	0
RED-GREEN DRIVE GAIN	RG	0 ~ 63 STEP	32
BLUE-GREEN DRIVE GAIN	BG	0 ~ 63 STEP	32
PAL VERTICAL SHIFT	PSL	0 ~ 31 STEP	8
PAL PEAK WHITE	PVS	0 ~ 15 STEP	6
PAL VERTICAL AMPLITUDE	PVA	0 ~ 63 STEP	32
PAL HORIZONTAL SHIFT	PHS	0 ~ 15 STEP	0
NTSC PEAK WHITE	NSL	0 ~ 31 STEP	8
NTSC VERTICAL SHIFT	NVS	0 ~ 15 STEP	1
NTSC VERTICAL AMPLITUDE	NVA	0 ~ 63 STEP	32
NTSC HORIZONTAL SHIFT	NHS	0 ~ 15 STEP	1

NOTE : PVS,PVA, PHS, NVS, NVA,NHS parameters must be aligned using both the 50Hz and 60Hz vertical-field rates.

Table 4-2 Main Adjustment Parameter (TTX μ -COM)

FUNCTION	OSD ABBREVIATION	RANGE	INITIAL DATA
AUTO GAIN CONTROL	AGC	0 ~ 63 STEP	40
SUB BRIGHT	SBT	0 ~ 63 STEP	44
SUB CONTRAST	SCT	0 ~ 63 STEP	32
SUB COLOR	SCR	0 ~ 27 STEP	13
PAL DELAY	PDL	0 ~ 7 STEP	2
RED CUTOFF	RC	0 ~ 254 STEP	0
GREEN CUTOFF	GC	0 ~ 254 STEP	0
BLUE CUTOFF	BC	0 ~ 254 STEP	0
RED-GREEN DRIVE GAIN	RG	0 ~ 63 STEP	32
BLUE-GREEN DRIVE GAIN	BG	0 ~ 63 STEP	32
PAL VERTICAL SHIFT	PSL	0 ~ 31 STEP	15
PAL PEAK WHITE	PVS	0 ~ 15 STEP	8
TTX SUB-CONTRAST	TSC	0 ~ 63 STEP	16

NOTE : PVS,PVA, PHS, parameters must be aligned using both the 50Hz vertical-field rates.

4-2-3 Test Pattern (Aging mode)

1. This mode can be used during servicing, or for confirming that the convergence and purity adjustments are correct.
2. Access the Test Pattern parameters by pressing a CHANNEL keys ($\blacktriangle$, $\blacktriangledown$) while the Service Mode is on. The cursor will move to the test pattern. Press the VOLUME keys. On-screen display:

■ RED _____
 ■ GREEN _____
 ■ BLUE _____
 ■ AGING _____

NON -TTX MICOM ONLY

TTX MICOM

3. AGING Mode (Reference Only)

This pattern is used for pre-heating the CRT during manufacturing--it is accessed in the factory by twice pressing the "FACTORY" key .

Even if the TV power is cut off, the Aging Mode is not cancelled. The AGING mode is cancelled by repressing the "FACTORY" key.

The patterns are displayed at 5 sec intervals : NON-TTX MICOM ONLY.

4-2-4 Option Bytes

In the Service Mode, various options can be selected via the Option Bytes (8 bits each). Example:

SYSTEM OSD DISPLAY	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
BYTE 0 : 8 -			L (BIT : 0)	H (BIT : 8)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)
BYTE 1 : 0 -	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)

CS SYSTEM, ENGLISH OSD, SYSTEM OSD DISPLAY

BYTE 0 : 9	L (BIT : 0)	H (BIT : 8)	L (BIT : 0)	H (BIT : 0)	L (BIT : 1)
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4-2-4 (a) For ASIA, Middle East and China NON TTX MODEL

BYTE 0 TABLE

	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
HIGH VALUE	128	64	32	16	8	4	2	1
LOW VALUE	0	0	0	0	0	0	0	0

↓

H : TDA7057AQ AUDIO MUTE
L : TDA7056 AUDIO MUTE

↓

H : VIDEO MODE - NO CHANNEL OSD DISPLAY
L : VIDEO MODE - CHANNEL OSD DISPLAY

↓

H : SYSTEM OSD DISPLAY
L : NO SYSTEM OSD DISPLAY

↓

H : CW SYSTEM (PAL, SECAM, NTSC4.43)
L : CS SYSTEM (PAL, SECAM, NTSC4.43, NTSC3.58)

↓

H : PAL-B (CB) SYSTEM ONLY
L : MULTI SYSTEM

↓

H : ENGLISH OSD ONLY
L : ENGLISH/MULTI LANGUAGE

BYTE 1 TABLE

	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
HIGH VALUE	64	32	16	8	4	2	1
LOW VALUE	0	0	0	0	0	0	0

↓

H : NO AFT SEARCH
L : AFT SEARCH

↓

H : ANALOG AFT
L : BUS AFT

↓

H : AUTO POWER OFF
L :

↓

H : AUTO POWER ON
L :

↓

H : AUTO MUTE
L : NO MUTE

↓

H :
L :

↓

H : HYPER TUNER
L : CATV TUNER

4-2-4 (b) For Europe, Oceania:NON TTX & TTX Model

BYTE 0 TABLE

	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
HIGH VALUE	128	64	32	16	8	4	2	1
LOW VALUE	0	0	0	0	0	0	0	0

↓

H : PAL ONLY
L :

↓

H : AUDIO AMP MUTE (EXTERNAL MUTE)
L :

↓

H : VIDEO MUTE CHANNEL NUMBER NO MARKED
L : VIDEO MUTE CHANNEL NUMBER MARKED

↓

H : AUTO POWER OFF
L :

↓

H : AUTO ON
L :

↓

H : AUTO MUTE (AT NO SIGNAL STATES)
L : NON MUTE (AT NO SIGNAL STATES)

↓

H : UHF ONLY
L :

↓

H : HYPER TUNER
L : NON HYPER TUNER

BYTE 1 TABLE (NON-TTX MODEL ONLY)

	BIT 0
HIGH VALUE	1
LOW VALUE	0

H : ENG ONLY
L : ENG/MULTI LANGUAGE

4-2-5 RESET

The Reset Mode is used during factory inspection.
Function Reset:

- | | | |
|----|----------|---------------------------|
| 1. | Channels | Added/Erase |
| 2. | Sort | Non |
| 3. | Language | Basic (English) |
| 4. | System | Auto (Non-TTX micom only) |

4-3 Other Adjustments

4-3-1 General

1. Usually, a color TV needs only slight touch-up adjustment upon installation. Check the basic characteristics such as height, horizontal and vertical sync and focus.
2. Observe the picture for good black and white details. There should be no objectionable color shading; if color shading is present, perform the purity and convergence adjustments described below.
3. Use the specified test equipment or its equivalent.
4. Correct impedance matching is essential.
5. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort test results.
6. Connect the TV only to an AC power source with voltage and frequency as specified on the backcover nameplate.
7. Do not attempt to connect or disconnect any wires while the TV is turned on. Make sure that the power cord is disconnected before replacing any parts.
8. To protect against shock hazard, use an isolation transformer.

4-3-2 Automatic Degaussing

A degaussing coil is mounted around the picture tube, so that external degaussing after moving the TV should be unnecessary. But the receiver must be properly degaussed upon installation.

The degaussing coil operates for about 1 second after the power is switched ON. If the set has been moved or turned in a different direction, disconnect its AC power for at least 120 minutes.

If the chassis or parts of the cabinet become magnetized, poor color purity will result. If this happens, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube and the sides and front of the receiver. Slowly withdraw the coil to a distance of about 6 feet before removing power.

4-3-3 High Voltage Check

CAUTION: There is no high voltage adjustment on this chassis. The B+ power supply must be set to +125 volts (full color bar input and normal picture level).

1. Connect a digital voltmeter to the second anode of the picture tube.
2. Turn on the TV. Set the Brightness and Contrast controls to minimum (zero beam current).
3. The high voltage should not exceed 29.0KV.
4. Adjust the Brightness and contrast controls to both extremes. Ensure that the high voltage does not exceed 29.0KV under any conditions.

4-3-4 FOCUS Adjustment

1. Input a black and white signal.
2. Adjust the tuning control for the clearest picture.
3. Adjust the FOCUS control for well defined scanning lines in the center area of the screen.

4-3-5 Screen Adjustment

1. Turn to the ACTIVE channel.
2. Adjust the VR screen for a normal picture is (no blooming or flyback line).
3. Adjust the FOCUS control for well defined scanning lines in the center area of the screen.

4-3-6 Purity Adjustment

1. Warm up the receiver for at least 20 minutes.
2. Plug in the CRT deflection yoke and tighten the clamp screw.
3. Plug the convergence yoke into the CRT and set in as shown in Fig. 4-1.
4. Input a black and white signal.
5. Fully demagnetize the receiver applying an external degaussing coil.
6. Turn the CONTRAST and BRIGHTNESS controls to maximum.
7. Loosen the clamp screw holding the yoke. Slide the yoke backward or forward to provide vertical green belt. (Fig. 4-2).
8. Tighten the convergence yoke.
9. Slowly move the deflection yoke forward, and adjust for the best overall green screen.
10. Temporarily tighten the deflection yoke.
11. Produce blue and red rasters by adjusting the low-light controls. Check for good purity in each field.
12. Tighten the deflection yoke.

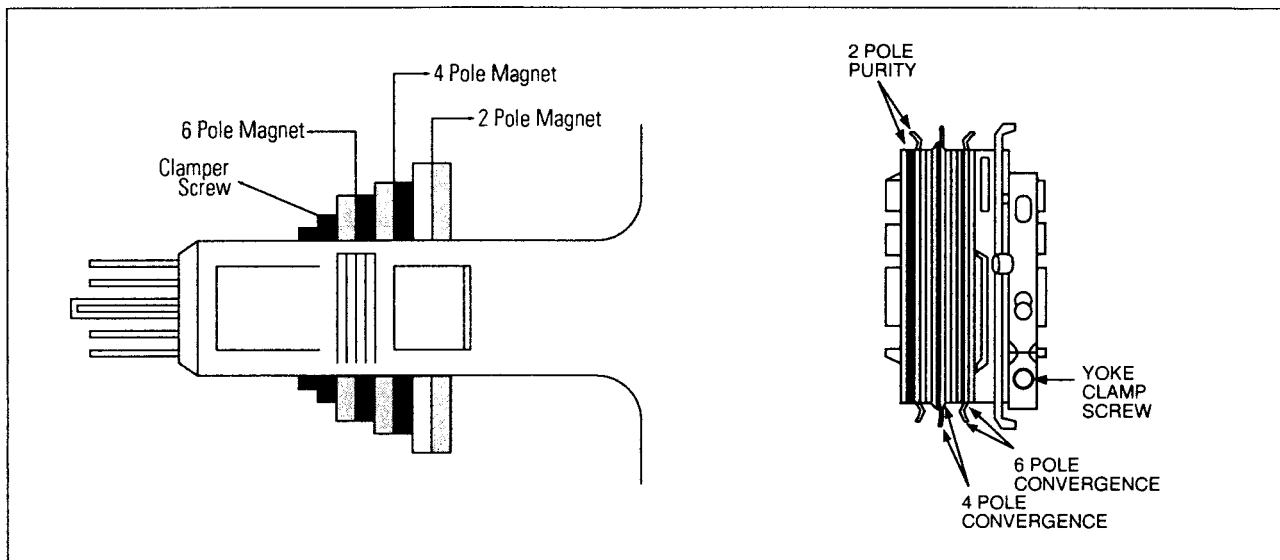


Fig. 4-1 Convergence Magnet Assembly

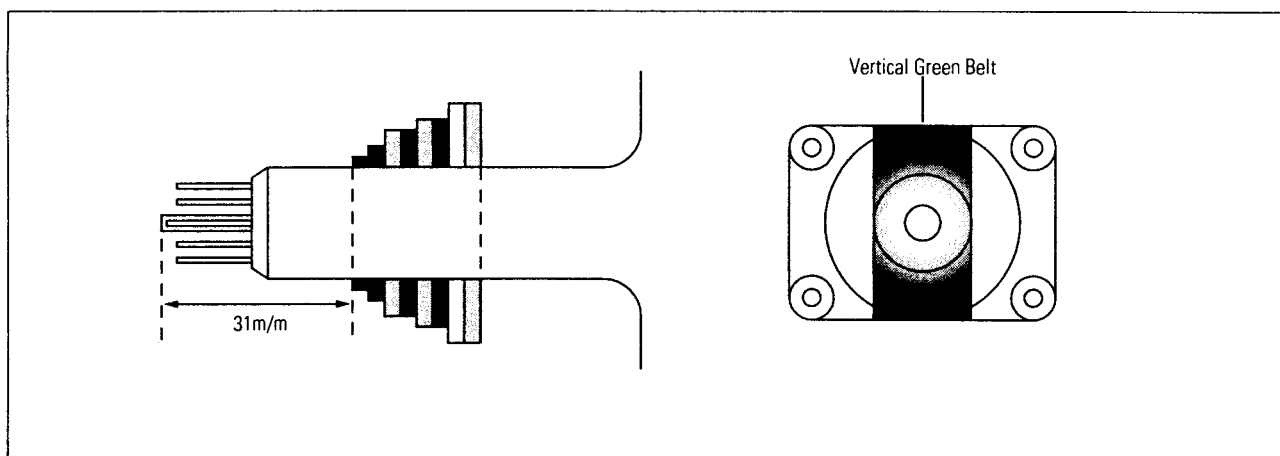


Fig. 4-2 Center Convergence Adjustment

4-3-7 White Balance Adjustment

4-3-7 (a) Low-light Adjustments:

1. Input either a lion head or a "pure white" pattern.
2. Warm up the TV for 30 minutes.
3. Check the data in the service mode:
RC, GC, BC are 0, RG, BG should be 32 (initial data).
4. Enter Horizontal Line mode by pressing MUTE.
5. Adjust the Screen VR on the FBT so that a dim colored line (red, green or blue) appears on the screen.
6. Adjust RC, BC, GC until the dim-colored line becomes white.
7. Exit the Horizontal Line mode via the MUTE key.

4-3-7 (b) High-light Adjustments:

1. After making the low-high adjustments, input a high-light pattern.
2. Adjust RG, BG in the Service Mode.
3. Recheck in low light.

4-3-8 Center Convergence Adjustment

1. Warm up the receiver for at least 20 minutes.
2. Adjust the two tabs of the 4 pole magnets to change the angle between them. Superimpose the red and blue vertical lines in the center area of the screen.
3. Adjust the Brightness and Contrast controls for a well defined picture.
4. Adjust the two-tab pairs of the 4 pole magnets, and change the angle between them. Superimpose the red and the blue vertical lines in the center area of the screen.
5. Turn the both tabs at the same time, keeping the angle constant, and superimpose the red and blue horizontal line in the center of the screen.
6. Adjust the two-tab pairs of the 6-pole magnets to superimpose the red and blue line onto the green. (Changing the angle affects the vertical lines, and rotating both magnets affects the horizontal lines.)
7. Repeat adjustments 2~6, if necessary.
8. Since the 4-pole magnets and 6-pole magnets interact, the dot movement is complex (Fig. 4-3).

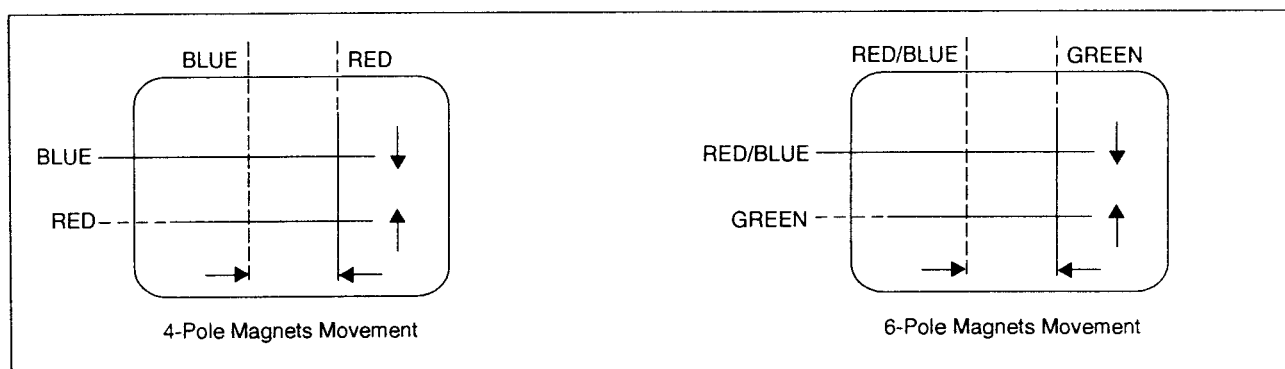


Fig 4-3 Center Convergence Adjustment

4-3-9 PIF Adjustment

1. Input a 38.9 MHz signal to the tuner (IF). Use a pattern generator (PM5518).
2. Connect DMM to IC101 Pin 1.
3. Turn T101 towards the right, and set it to $4.0 \pm 0.3V$.

4-3-10 SIF VCO Adjustment

1. Input a color bar pattern. Use a pattern generator without modulating the audio signal.
2. Set the oscilloscope to AC 2mV/DIV, 50nSEC/DIV. Adjust TK01 to get the maximum sine wave (probe 10:1). Connect the oscilloscope probe to Pin 2 ($\mu 52777SP$).

4-3-11 RF AGC Adjustment

1. Input a VHF High channel (80dB).
2. Connect DMM to IC201 Pin 4.
3. Adjust the AGC in the Factory mode. Set Pin 4 to $2.25 \pm 0.05V(DC)$.

4-3-12 Sub-Contrast Adjustment

1. Input a gray scale. (Use a pattern generator, PM5518.)
2. Short D202, Switch off the ABL feedback.
3. Check CN501B G-OUT (use an oscilloscope).
4. Set RC,GC,BC data to 0 in the Factory Mode.
5. Adjust Sub-Contrast (SCT) in the Factory Mode. Set the black and white level to $2.0V \pm 0.05V_{p-p}$.
6. Remove the short across D202 and restore ABL.

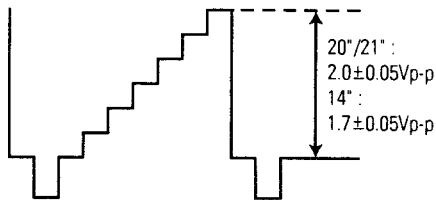


Fig. 4-4

4-3-13 Sub-Tint Adjustment (CW, CS Model)

1. Input NTSC color bars. Use a pattern generator (PM5518.)
2. Check CN501B B-OUT (oscilloscope).
3. Adjust the 1st and the 2nd bars so that their heights are equal.

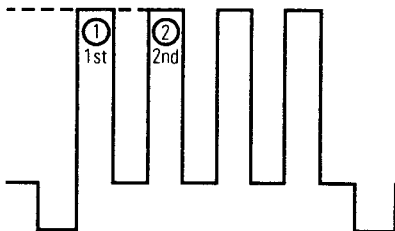


Fig. 4-5

4-3-14 Sub-Color Adjustment

1. Input a color bar pattern. (Use a pattern generator, PM5518.)
2. Check CN501B G-OUT with an oscilloscope.

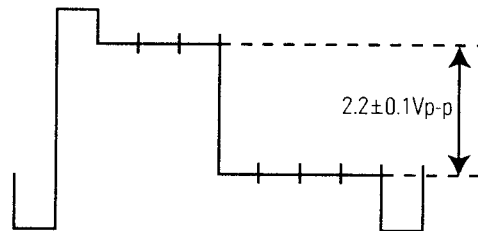


Fig. 4-6

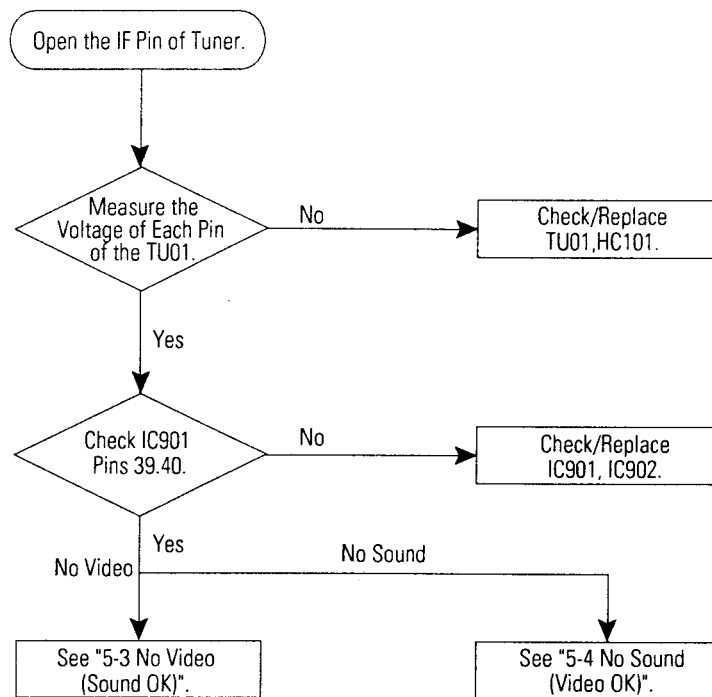
3. Short D202 and switch off the ABL feed-back.
4. Adjust SCR to $2.2V \pm 0.1V$ in the factory mode.
5. Remove the short across D202 and restore the ABL.

4-3-15 Geometry Adjustment (Size -> Center -> H-Phase)

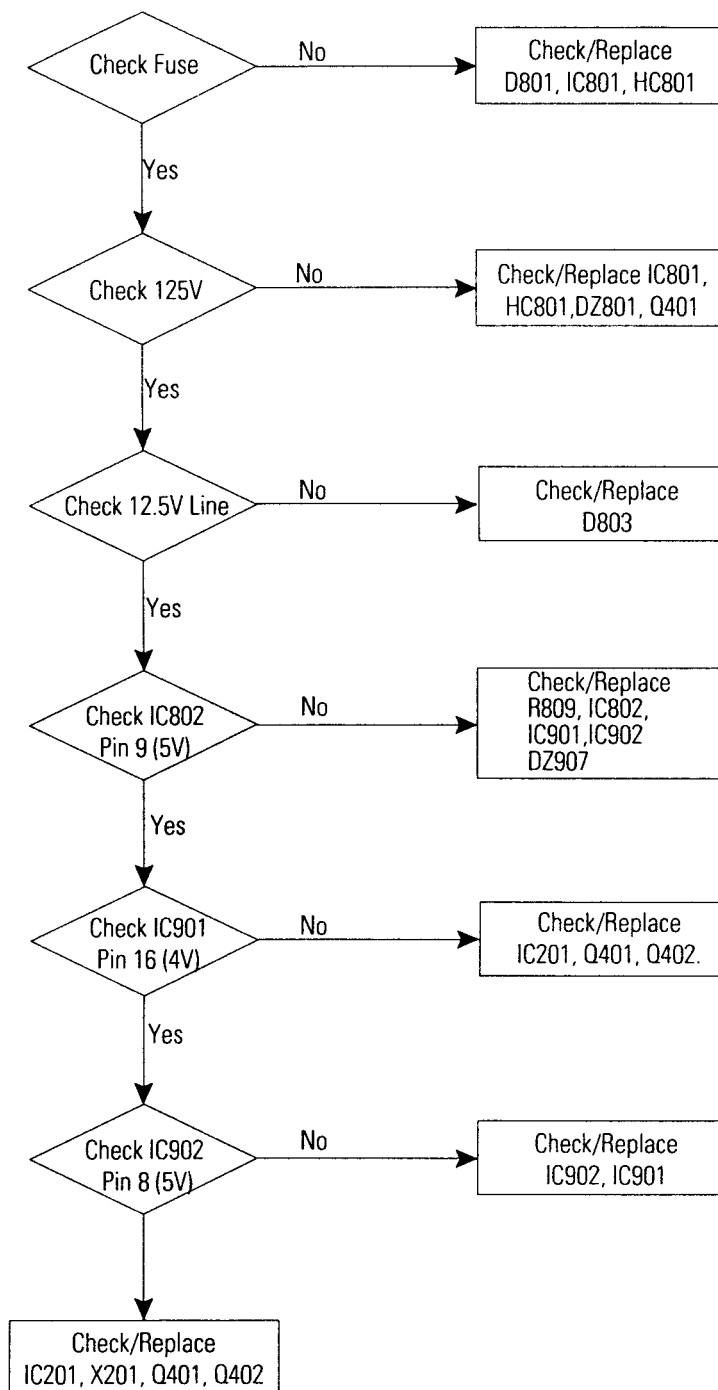
1. Input a lion head pattern.
2. Adjust V-HEIGHT. Set the vertical size to "4".
3. Adjust V-CENTER. Align the center of the lion pattern with the center of the TV screen.
4. Adjust H-PHASE. Center the lion pattern.

5. Troubleshooting

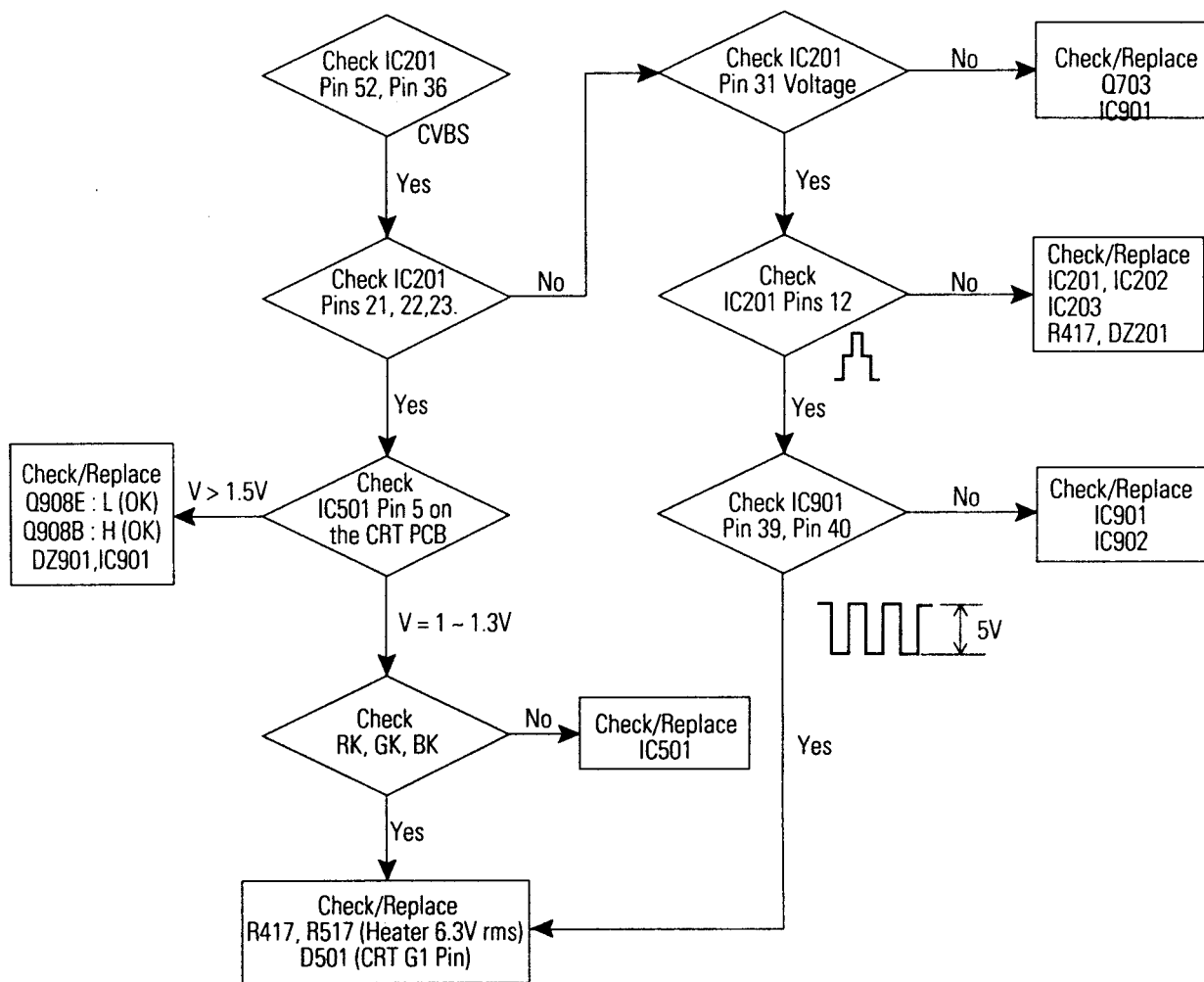
5-1 No Video (Raster On, No Sound)



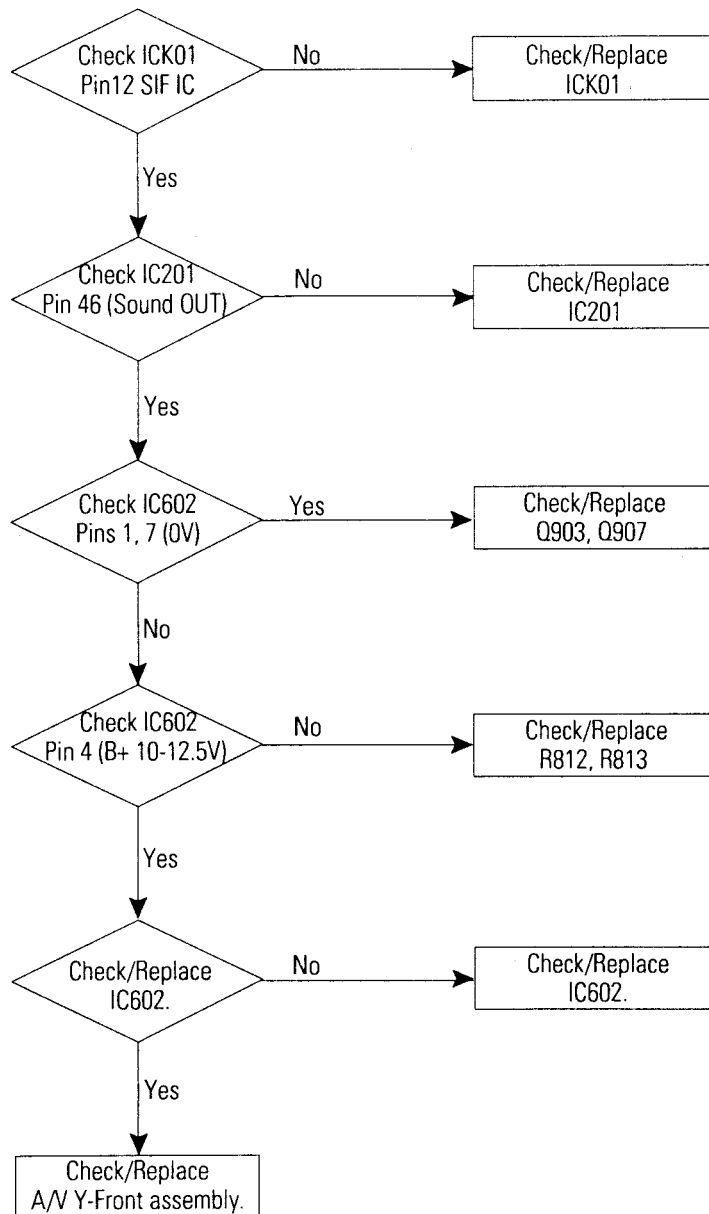
5-2 No Power



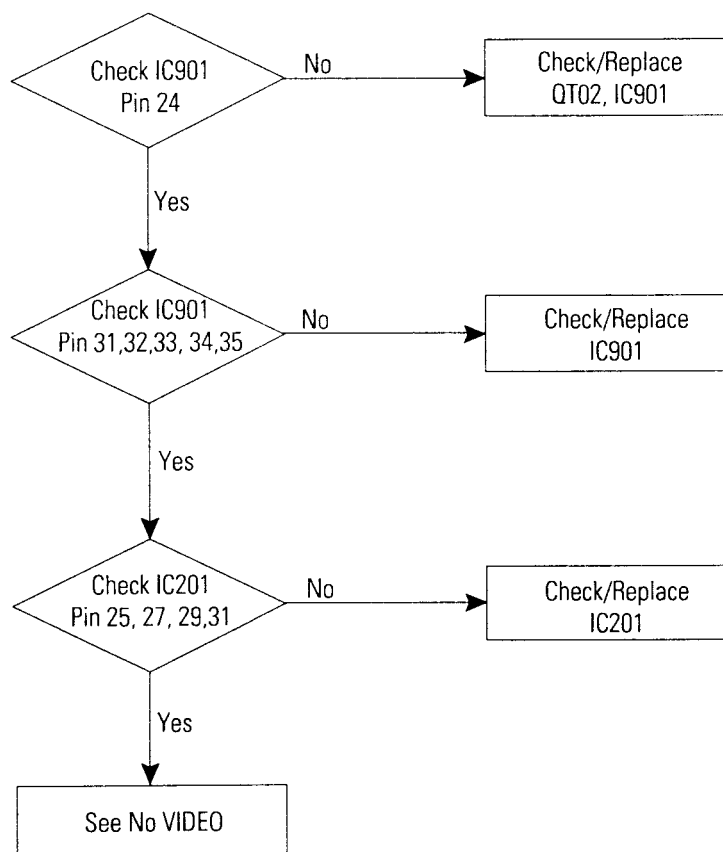
5-3 No Raster (Deflection OK)



5-4 No Sound (Video OK)



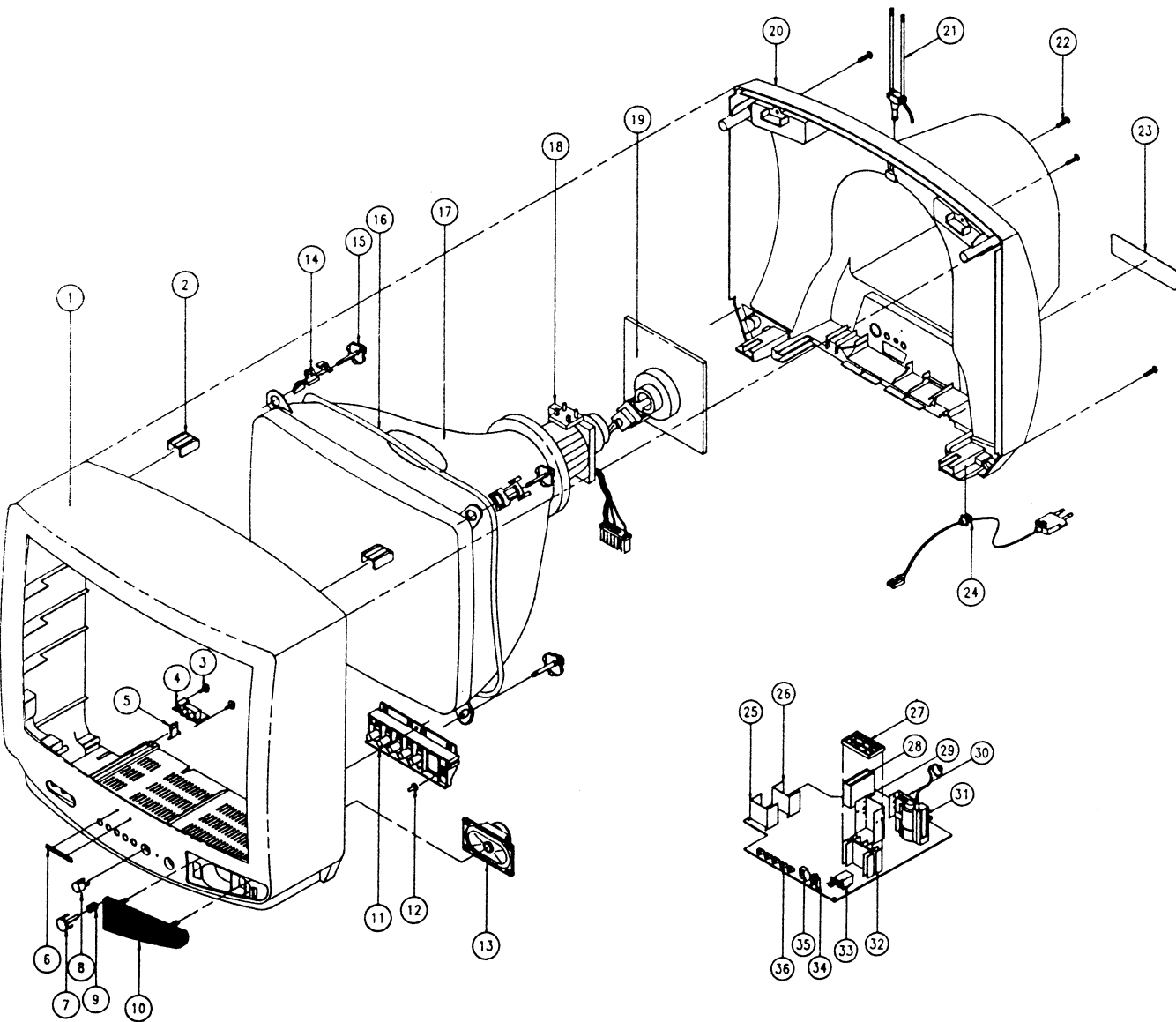
5-5 No TTX



MEMO

6. Exploded View and Parts List

6-1 CK5073Z/CK5373Z,T Common



NO	Part - No	Description	Specification	Remarks	Q'ty
1	AA91-10073D	ASSY-CABINET,FRONT	-,5073,PA100 MLN,HB,-		1
	AA64-30118E	CABINET-FRONT	-,5073,PA100 MLN,HIPS,HB,		1
2	AA61-40010A	BOSS-WING	-,HIPS,HB,NTR,-,-		2
3	AA60-10002A	SCREW-TAPPING	RH,+,M4,L12,ZPC(YEL),-,0D		2
4	AA95-90016G	ASSY-PCB,A/V FRONT	-,38,73,.,SCT11D,9P,230V,-		1
5	AA61-40007A	STOPPER-PCB	5038,5368,ABS HB,NTR,-,-,		1
6	AA64-70015A	BADGE-BRAND	AL,SS R2000 22,SILVER,L45		1
7	AA64-10131A	KNOB-POWER	-,5073,-,ABS,HB,BLK		1
8	AA64-40044A	WINDOW-REMOCON	-,5073,NO-SILK,ABS,HB,-,-		1
9	AA61-60003T	SPRING-CS	-,SUS304,0.5,0D7,H13.5,N5		1
10	AA63-50095A	GRILLE-WOOFER	-,5073,PA110 P10.6,SECC,T	S.N.A	1
11	AA64-10039A	KNOB-CONTROL	-,5073,-,ABS,HB,BLK		1
12	AA64-40182A	INDICATOR-LED	-,5073,-,ACRYL,-,-,-		1
13	3001-000003	SPEAKER	3W,160HM,88+-2DB,180+-36H		1
14	AA65-30019A	CLAMP-D,COIL	NYLON-66,VO,NTR,DADH-460		4
15	AA60-10017A	SCREW-ASSY	-,WC,RH,+,M5,L35,SWRCH18A		4
16	AA27-20002A	COIL-DEGAUSSING	-,20",13.50HM,35T,L2300,E		1
17	AA03-10003L	CRT-COLOR	-,A48KP082X(U),+380MG,20"		1
18	AA27-50001S	DEFLECTION-YOKE	-,DSE-1992LL(1),20"/A48KR		1
19	3704-000110	SOCKET-CRT	14P,29.1,25.5,SN,ISHS09S/		1
20	AA64-30375C	CABINET-BACK	-,5038,73,NON-PBDE,HIPS,V		1
21	AA42-10001D	ANT-ROD	DP,4S,620MM,SUS,UL/GSA		1
22	6002-000514	SCREW-TAPPING	RH,+,2,M4,L15,ZPC(BLK),SW		4
23		CABINET-BACK,OPTION			1
24	AA61-20070A	HOLDER-CORD	-,-,PP,VO,BLK,KE-0002		1
25	1201-000535	IC-AUDIO AMP	7056,SIP,9P,-,SINGLE,40.5	IC601	1
26	1203-000644	IC-POS, FIXED REG.	7630,SIP,10P,-,PLASTIC,5.	IC802	1
27	AA63-30069A	COVER-HEATSINK	-,-,HEATSINK 44MM,ABS,-,N		1
28	AA40-10002J	TUNER-V/S	-,TECC2989VD28A,PAL-B/G,T		1
29	1204-000441	IC-IF CIRCUIT	TDAB356,SIP,9P,-,PLASTIC,	IC301	1
30	0502-000295	TR-POWER	KSD5072YD,NPN,1500V,800V,	Q401	1
31	AA26-30001Y	TRANS-FLYBACK	-,FSV-20A001,20",125V		1
32	AA13-20004P	IC-HYBRID	DP,SMR40200C,SIP,5P,SMPS	IC801	1
33	3403-000179	SWITCH-PUSH	250V,5A,DPST,-		1
34	AA96-30001B	ASSY-LED, GUIDE	-,AA61-50055A,DL-G5RGA,-		1
35	AA59-60001U	MODULE-REMOCON	-,ORC-50VF,38KHZ,940NM,ME		1
36	3404-000244	SWITCH-TACT	15V,20MA,90-170GF,7.5X7MM		5

7. Electric Parts List

7-1CK5373Z1SSHX (21") Dissimilar Parts

Loc	Part-No	Description	Specification	Remarks
ASSY-PCB,MAIN(OPT)				
BUYER : SEH (HUNGARY)				
*	AA94-10092Q	ASSY-PCB,MAIN(OPT)	CK5373Z1SSHX,SCT110,BULGA	
C403	2201-000406	C-CERAMIC,DISC	270PF,10%,2KV,Y5P,8X5,7.5	
C413	2401-001530	C-AL	47UF,20%,25V,GP,5X11MM,5M	
C503	2202-000279	C-CERAMIC,MLC-AXIAL	47PF,5%,50V,SL,3.5X19,-,T	
C504	2202-000279	C-CERAMIC,MLC-AXIAL	47PF,5%,50V,SL,3.5X19,-,T	
C505	2202-000279	C-CERAMIC,MLC-AXIAL	47PF,5%,50V,SL,3.5X19,-,T	
C801	2401-002297	C-AL	220UF,20%,400V,GP,25X35MM	
C910	2702-000181	INDUCTOR-RADIAL	680UH,5%,6X6,4MM	
C911	2301-000227	C-FILM,PEF	27NF,5%,50V,7X3.5X6.5MM,5	
C916	2301-000188	C-FILM,PEF	1NF,5%,100V,10.5X12.5X6.5	
C919	2202-000173	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
CN802	AA27-20001Z	COIL-DEGAUSSING	-,21",14.5OHM,35T,L2500,E	
CJ01	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
CJ02	2401-001495	C-AL	47UF,20%,16V,GP,5X11MM,5M	
D905	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D906	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D907	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D908	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D913	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
IC901	AA13-30011F	IC-MCU	-,Z8933212PSC-R2558,16BIT	
R235	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8	
R302	2001-000016	R-CARBON(S)	10HM,5%,1/2W,AA,TP,2.4X6.	
R306	2003-001018	R-METAL OXIDE(S)	220OHM,5%,2W,AF,TP,3.9X10	
R712	2001-000869	R-CARBON	56OHM,5%,1/8W,AA,TP,1.8X3	
R713	2001-000527	R-CARBON	22OHM,5%,1/8W,AA,TP,1.8X3	
R714	2001-000527	R-CARBON	22OHM,5%,1/8W,AA,TP,1.8X3	
R715	2001-000527	R-CARBON	22OHM,5%,1/8W,AA,TP,1.8X3	
R753	2001-000869	R-CARBON	56OHM,5%,1/8W,AA,TP,1.8X3	
R754	2001-000869	R-CARBON	56OHM,5%,1/8W,AA,TP,1.8X3	
R809	2008-000299	R-FUSIBLE	470HM,5%,2W,AF,TP,3.9X10M	
R906	2001-000472	R-CARBON	2.7KOHM,5%,1/8W,AA,TP,1.8	
R907	2004-001291	R-METAL	820OHM,5%,1/8W,AA,TP,1.8X	
R908	2001-000214	R-CARBON	1.1KOHM,5%,1/8W,AA,TP,1.8	
R909	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8	
R916	2001-000857	R-CARBON	560OHM,5%,1/8W,AA,TP,1.8X	
R917	2001-000857	R-CARBON	560OHM,5%,1/8W,AA,TP,1.8X	
R918	2001-000857	R-CARBON	560OHM,5%,1/8W,AA,TP,1.8X	
R934	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8	
R944	2004-001201	R-METAL	68KOHM,5%,1/8W,AA,TP,1.8X	
R945	2001-001062	R-CARBON(S)	10MOHM,5%,1/2W,AA,TP,2.4X	
R948	2001-000241	R-CARBON	1.5KOHM,5%,1/8W,AA,TP,1.8	
R949	2001-000472	R-CARBON	2.7KOHM,5%,1/8W,AA,TP,1.8	
R955	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
RJ01	2001-000832	R-CARBON	510OHM,5%,1/8W,AA,TP,1.8X	
X901	2801-003224	CRYSTAL-UNIT	32.768KHZ,20PPM,2P-AAV,12	
ASSY-CRT				
AA03-10004J	CRT-COLOR	-,A51KJ63X(U),+380MG,21"		
AA27-50002G	DEFLECTION-YOKE	-,DST-2192ML(1),21"/A51KJ		
ASSY-SPEAKER				
3001-001004	SPEAKER	3W,160HM,90DB,180HZ		

Loc	Part-No	Description	Specification	Remarks
REMOCON				
*	AA59-10081N	REMOCON	-,TM51,SZM139,26,L/GRY,SS	
ASSY-ACCESSORY				
	AA68-10944A	MANUAL-USERS	SCT11D,W/P100(G),A4,RUS,T	
	AA68-10950A	MANUAL-USERS	SCT11D,W/P100(G),A4,ENG,T	
ASSY-CABINET(OPT)				
	AA91-10130G	ASSY-CABINET,FRONT	-,5373,PA100 MLN,HB,-	
	AA64-30121A	CABINET-FRONT	-,5373,PA100 MLN,HIPS,HB,	
	AA64-30710C	CABINET-BACK	-,5338.73,NON-PBDE,HIPS,V	
SPK+CF	6002-000514	SCREW-TAPPING	RH,+,2,M4,L15,ZPC(BLK),SW	
	AA63-50097A	GRILLE-WOOFER	-,5373,PA110,SECC,T0.5,-,	
	AA64-10041A	KNOB-CONTROL	-,5373,-,ABS,HB,BLK	
	AA64-10132A	KNOB-POWER	-,5373,NO-COATING,ABS,HB,	
	AA64-40083A	WINDOW-REMOCON	-,ABS,HB,-,-,NO-SILK,5373	
	AA64-40183A	INDICATOR-LED	-,5373,-,ACRYL,-,-,-	

7-2CK5073Z1SSHX (20") Dissimilar Parts

Loc	Part-No	Description	Specification	Remarks
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ASSY-PCB,MAIN(OPT)

BUYER : SSH (GERMANY)

*	AA94-10092K	ASSY-PCB,MAIN(OPT)	CK5073Z1SSHX,SCT110,BULGA	
C413	2401-001530	C-AL	47UF,20%,25V,GP,5X11MM,5M	
C503	2202-000279	C-CERAMIC,MLC-AXIAL	47PF,5%,50V,SL,3.5X19,-,T	
C504	2202-000279	C-CERAMIC,MLC-AXIAL	47PF,5%,50V,SL,3.5X19,-,T	
C505	2202-000279	C-CERAMIC,MLC-AXIAL	47PF,5%,50V,SL,3.5X19,-,T	
C910	2702-000181	INDUCTOR-RADIAL	680UH,5%,6X6.4MM	
C911	2301-000227	C-FILM,PEF	27NF,5%,50V,7X3.5X6.5MM,5	
C916	2301-000188	C-FILM,PEF	1NF,5%,100V,10.5X12.5X6.5	
C919	2202-000173	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
CU01	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
CU02	2401-001495	C-AL	47UF,20%,16V,GP,5X11MM,5M	
D905	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D906	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D907	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D908	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D913	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
IC901	AA13-30011F	IC-MCU	-,Z8933212PSC-R2558,16BIT	
R235	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8	
R712	2001-000869	R-CARBON	56OHM,5%,1/8W,AA,TP,1.8X3	
R713	2001-000527	R-CARBON	22OHM,5%,1/8W,AA,TP,1.8X3	
R714	2001-000527	R-CARBON	22OHM,5%,1/8W,AA,TP,1.8X3	
R715	2001-000527	R-CARBON	22OHM,5%,1/8W,AA,TP,1.8X3	
R753	2001-000869	R-CARBON	56OHM,5%,1/8W,AA,TP,1.8X3	
R754	2001-000869	R-CARBON	56OHM,5%,1/8W,AA,TP,1.8X3	
R809	2008-000299	R-FUSIBLE	47OHM,5%,2W,AF,TP,3.9X10M	
R906	2001-000472	R-CARBON	2.7KOHM,5%,1/8W,AA,TP,1.8	
R907	2004-001291	R-METAL	820OHM,5%,1/8W,AA,TP,1.8X	
R908	2001-000214	R-CARBON	1.1KOHM,5%,1/8W,AA,TP,1.8	
R909	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8	
R916	2001-000857	R-CARBON	560OHM,5%,1/8W,AA,TP,1.8X	
R917	2001-000857	R-CARBON	560OHM,5%,1/8W,AA,TP,1.8X	
R918	2001-000857	R-CARBON	560OHM,5%,1/8W,AA,TP,1.8X	
R934	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8	
R944	2004-001201	R-METAL	68KOHM,5%,1/8W,AA,TP,1.8X	
R945	2001-001062	R-CARBON(S)	10MOHM,5%,1/2W,AA,TP,2.4X	
R948	2001-000241	R-CARBON	1.5KOHM,5%,1/8W,AA,TP,1.8	
R949	2001-000472	R-CARBON	2.7KOHM,5%,1/8W,AA,TP,1.8	
R955	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
RJ01	2001-000832	R-CARBON	510OHM,5%,1/8W,AA,TP,1.8X	
X901	2801-003224	CRYSTAL-UNIT	32.768KHZ,20PPM,28-AAY,12	

REMOCON

*	AA59-10081N	REMOCON	-,TMS1,SZM139,26,L/GRY,SS	
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ASSY-ACCESSORY

AA68-10944A	MANUAL-USERS	SCT110,W/P100(G),A4,RUS,T	
AA68-10950A	MANUAL-USERS	SCT110,W/P100(G),A4,ENG,T	

7-3CK5373T1SSHX (21") Dissimilar Parts

Loc	Part-No	Description	Specification	Remarks
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ASSY-PCB,MAIN(OPT)

BUYER : SEH (HUNGARY)

* AA94-10093C ASSY-PCB,MAIN(OPT) CK5373T1SSHX,SCT110,BULGA

C403 2201-000406 C-CERAMIC,DISC 270PF,10%,2KV,Y5P,8X5,7.5

C801 2401-002297 C-AL 220UF,20%,400V,GP,25X35MM

CN802 AA27-20001Z COIL-DEGAUSSING -,21",14.5OHM,35T,L2500,E

R302 2001-000016 R-CARRON(S) 10HM,5%,1/2W,AA,TP,2.4XB.

R306 2003-001018 R-METAL OXIDE(S) 2200HM,5%,2W,AF,TP,3.9X10

ASSY-CRT

AA03-10004J CRT-COLOR -,A51KQJ63X(U),+380MG,21"

AA27-50002G DEFLECTION-YOKE -,DST-2192ML(1),21"/A51KQ

ASSY-SPEAKER

3001-001004 SPEAKER 3W,160HM,900B,180HZ

ASSY-CABINET(OPT)

* AA91-10130G ASSY-CABINET,FRONT -,5373,PA100 MLN,HB,-

AA64-30121A CABINET-FRONT -,5373,PA100 MLN,HIPS,HB.

AA64-30710C CABINET-BACK -,533B.73,NON-PRDF,HIPS,V

SPK+CF 6002-000514 SCREW-TAPPING RH,+,2,M4,L15,ZPC(BLK),SW

AA63-50097A GRILLE-WOOFER -,5373,PA110,SFCC,T0.5,-,

AA64-10041A KNOB-CONTROL -,5373,-,ABS,HB,BLK

AA64-10132A KNOB-POWER -,5373,NO-COATING,ABS,HB.

AA64-40083A WINDOW-REMOCON -,ABS,HB,-,-,NO-SILK,5373

AA64-40183A INDICATOR-LED -,5373,-,ACRYL,-,-,-

7-4CK5073T1SSHX (20") Common

Loc	Part-No	Description	Specification	Remarks
ASSY-PCB,MAIN(OPT)				
BUYER : SEH (HUNGARY)				
*	AA94-10093A	ASSY-PCB,MAIN(OPT)	CK5073T1SSHX,SCT11D,BULGA	
C101	2401-000660	C-AL	2.2UF,20%,50V,GP,5X11MM,5	
C102	2401-001082	C-AL	330NF,20%,50V,GP,5X11MM,5	
C103	2401-000269	C-AL	100UF,20%,16V,GP,6X11MM,5	
C104	2401-000758	C-AL	220NF,20%,50V,GP,5X11MM,5	
C105	2202-000109	C-CERAMIC,MLC-AXIAL	100NF,+80-20%,50V,Y5P,1.9	
C107	2202-000109	C-CERAMIC,MLC-AXIAL	100NF,+80-20%,50V,Y5P,1.9	
C108	2401-000480	C-AL	10UF,20%,50V,GP,5X11,5,TP	
C109	2305-000665	C-FILM,MPEF	100NF,5%,63V,7.5X4.0X5.0M	
C201	2401-000223	C-AL	100NF,20%,50V,LL,5X11MM,5	
C202	2401-001495	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C203	2401-000269	C-AL	100UF,20%,16V,GP,6X11MM,5	
C205	2202-000127	C-CERAMIC,MLC-AXIAL	10NF,+80-20%,25V,Y5V,-,7.	
C206	2401-000603	C-AL	1UF,20%,50V,GP,5X11MM,5MM	
C207	2401-000269	C-AL	100UF,20%,16V,GP,6X11MM,5	
C208	2401-001495	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C209	2202-000222	C-CERAMIC,MLC-AXIAL	3.3NF,20%,16V,Y5P,-,7.5.T	
C210	2202-000716	C-CERAMIC,MLC-AXIAL	1.8NF,20%,16V,Y5R,3.5X19.	
C210	2202-000717	C-CERAMIC,MLC-AXIAL	2.7NF,20%,16V,Y5R,-,7.5.T	
C211	2301-000301	C-FILM,PEF	6.8NF,5%,50V,6.5X5.5X3.0X	
C212	2301-000224	C-FILM,PEF	22NF,5%,50V,7.4X3.9X13MM,	
C214	2401-000603	C-AL	1UF,20%,50V,GP,5X11MM,5MM	
C215	2301-000175	C-FILM,PEF	15NF,5%,50V,7.1X3.5X13MM,	
C216	2401-000603	C-AL	1UF,20%,50V,GP,5X11MM,5MM	
C217	2202-000173	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
C218	2202-000173	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
C219	2401-001333	C-AL	0.47UF,20%,50V,GP,5X11,5.	
C220	2401-001495	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C221	2401-001495	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C222	2401-001333	C-AL	0.47UF,20%,50V,GP,5X11,5.	
C223	2305-000289	C-FILM,MPEF	220NF,5%,63V,-,5MM,TP	
C224	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
C225	2401-001495	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C226	2301-000285	C-FILM,PEF	47NF,5%,50V,7.5X4.0X6.5,5	
C227	2202-000127	C-CERAMIC,MLC-AXIAL	10NF,+80-20%,25V,Y5V,-,7.	
C228	2201-000179	C-CERAMIC,DISC	10NF,10%,50V,Y5V,12.5X4.0	
C229	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
C230	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
C231	2401-001264	C-AL	4.7UF,20%,50V,BP,6X11MM,5	
C232	2401-001323	C-AL	470NF,20%,50V,BP,6X11MM,5	
C233	2202-000286	C-CERAMIC,MLC-AXIAL	56PF,5%,50V,SL,1.9X3.5,-	
C234	2202-000173	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
C235	2202-000173	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
C236	2202-000173	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
C237	2401-001495	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C239	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
C240	2201-000982	C-CERAMIC,DISC	10NF,+80-20%,50V,Y5V,10X4	
C242	2401-000603	C-AL	1UF,20%,50V,GP,5X11MM,5MM	
C243	2401-000440	C-AL	10UF,20%,25V,GP,5X11MM,5M	
C244	2401-001495	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C246	2202-000173	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
C251	2202-000717	C-CERAMIC,MLC-AXIAL	2.7NF,20%,16V,Y5R,-,7.5.T	
C252	2401-000758	C-AL	220NF,20%,50V,GP,5X11MM,5	
C302	2401-002288	C-AL	470UF,20%,25V,WT,10X16,5.	

Loc	Part-No	Description	Specification	Remarks
C304	2305-000149	C-FILM,MPEF	100NF,5%,100V,7.5X4.0X5.0	
C306	2305-000149	C-FILM,MPEF	100NF,5%,100V,7.5X4.0X5.0	
C307	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
C308	2401-002293	C-AL	68UF,20%,100V,WT,10X20,5.	
C401	2301-000380	C-FILM,PEF	10NF,5%,50V,6.5X3MM,5MM,T	
C402	2306-000253	C-FILM,MPPF	7.2NF,5%,1.6KV,28.5X18,5.	
C403	2201-000991	C-CERAMIC,DISC	560PF,10%,2KV,Y5P,8X5,5,T	
C404	2306-000204	C-FILM,MPPF	430NF,5%,400V,-,20MM,TP	
C405	2305-000154	C-FILM,MPEF	100NF,5%,400V,21.5X6.5X11	
C406	2201-000599	C-CERAMIC,DISC	560PF,10%,500V,Y5P,6X4,5.	
C408	2201-000556	C-CERAMIC,DISC	470PF,10%,500V,Y5P,6X3,5.	
C409	2401-002293	C-AL	68UF,20%,100V,WT,10X20,5.	
C410	2401-001530	C-AL	47UF,20%,25V,GP,5X11MM,5M	
C411	2201-000556	C-CERAMIC,DISC	470PF,10%,500V,Y5P,6X3,5.	
C412	2401-002278	C-AL	22UF,20%,250V,WT,13X20,5.	
C413	2401-001537	C-AL	47UF,20%,25V,GP,6.3X7MM,5	
C414	2401-001530	C-AL	47UF,20%,25V,GP,5X11MM,5M	
C415	2401-000558	C-AL	1UF,20%,160V,GP,6X11MM,5M	
C416	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
C417	2305-000355	C-FILM,MPEF	330NF,5%,63V,-,5MM,TP	
C418	2301-000261	C-FILM,PEF	4.7NF,5%,100V,10.5X12.5X6	
C419	2201-000288	C-CERAMIC,DISC	1NF,10%,2KV,Y5P,10X5,10.T	
C501	2305-000704	C-FILM,MPEF	100NF,5%,250V,16.5X5.7X10	
C503	2202-000243	C-CERAMIC,MLC-AXIAL	33PF,5%,50V,SL,3.5X19,-,T	
C504	2202-000243	C-CERAMIC,MLC-AXIAL	33PF,5%,50V,SL,3.5X19,-,T	
C505	2202-000243	C-CERAMIC,MLC-AXIAL	33PF,5%,50V,SL,3.5X19,-,T	
C506	2201-000969	C-CERAMIC,DISC	10NF,+80-20%,3KV,Y5V,-,10	
C507	2305-000289	C-FILM,MPEF	220NF,5%,63V,-,5MM,TP	
C508	2401-000636	C-AL	2.2UF,20%,315V,GP,8X12MM,	
C509	2401-000636	C-AL	2.2UF,20%,315V,GP,8X12MM,	
C601	2202-000199	C-CERAMIC,MLC-AXIAL	22NF,+80-20%,25V,Y5V,-,7.	
C605	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
C606	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
C610	2401-000832	C-AL	220UF,20%,25V,GP,8X11MM,5	
C611	2301-000380	C-FILM,PEF	10NF,5%,50V,6.5X3MM,5MM,T	
C612	2401-001323	C-AL	470NF,20%,50V,BP,6X11MM,5	
C701	2401-001264	C-AL	4.7UF,20%,50V,BP,6X11MM,5	
C702	2401-001264	C-AL	4.7UF,20%,50V,BP,6X11MM,5	
C703	2202-000121	C-CERAMIC,MLC-AXIAL	100PF,10%,50V,Y5P,1.9X3.5	
C704	2401-000471	C-AL	10UF,20%,50V,BP,6X11MM,5M	
C705	2202-000121	C-CERAMIC,MLC-AXIAL	100PF,10%,50V,Y5P,1.9X3.5	
C706	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
C707	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
C708	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
C709	2401-001495	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C801	2401-002219	C-AL	220UF,20%,400V,GP,25X40,1	
C802	2201-000963	C-CERAMIC,DISC	1NF,20%,400V,Y5U,11X8MM,1	
C803	2303-000163	C-FILM,PPF	2.2NF,5%,800V,15X13X8,5,7	
C804	2201-000987	C-CERAMIC,DISC	2.2NF,20%,400V,Y5U,12X10,	
C805	2201-000991	C-CERAMIC,DISC	560PF,10%,2KV,Y5P,8X5,5,T	
C806	2401-000293	C-AL	100UF,+30-10%,200V,HR,16X	
C807	2201-000991	C-CERAMIC,DISC	560PF,10%,2KV,Y5P,8X5,5,T	
C808	2401-002294	C-AL	1000UF,20%,25V,GP,10X20MM	
C809	2401-000832	C-AL	220UF,20%,25V,GP,8X11MM,5	
C810	2401-000553	C-AL	1UF,10%,50V,HR,5X11MM,5MM	
C811	2201-000991	C-CERAMIC,DISC	560PF,10%,2KV,Y5P,8X5,5,T	
C812	2401-000269	C-AL	100UF,20%,16V,GP,6X11MM,5	
C813	2401-001530	C-AL	47UF,20%,25V,GP,5X11MM,5M	

Loc	Part-No	Description	Specification	Remarks
C814	2306-000321	C-FILM,MPPF	470NF,5%,250V,-,22.5MM,TP	
C815	2201-000467	C-CERAMIC,DISC	330PF,10%,2KV,Y5P,-,7.5,T	
C816	2401-001530	C-AL	47UF,20%,25V,GP,5X11MM,5M	
C817	2306-000122	C-FILM,MPPF	100NF,5%,50V,7.3X4.0X5.0M	
C818	2202-000109	C-CERAMIC,MLC-AXIAL	100NF,+80-20%,50V,Y5P,1.9	
C819	2401-002294	C-AL	1000UF,20%,25V,GP,10X20MM	
C820	2305-000355	C-FILM,MPEF	330NF,5%,63V,-,5MM,TP	
C821	2202-000109	C-CERAMIC,MLC-AXIAL	100NF,+80-20%,50V,Y5P,1.9	
C822	2202-000109	C-CERAMIC,MLC-AXIAL	100NF,+80-20%,50V,Y5P,1.9	
C823	2401-000440	C-AL	10UF,20%,25V,GP,5X11MM,5M	
C851	2401-002280	C-AL	22UF,20%,35V,LZ,5X11.5,T	
C852	2202-000716	C-CERAMIC,MLC-AXIAL	1.8NF,20%,16V,Y5R,3.5X19,	
C853	2401-000293	C-AL	100UF,+30-10%,200V,HR,16X	
C901	2401-000269	C-AL	100UF,20%,16V,GP,6X11MM,5	
C902	2202-000173	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
C903	2401-000440	C-AL	10UF,20%,25V,GP,5X11MM,5M	
C904	2202-000173	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
C905	2401-001333	C-AL	0.47UF,20%,50V,GP,5X11.5,-	
C906	2401-000947	C-AL	22UF,20%,35V,GP,5X11MM,-	
C907	2202-000109	C-CERAMIC,MLC-AXIAL	100NF,+80-20%,50V,Y5P,1.9	
C908	2201-000573	C-CERAMIC,DISC	47PF,5%,50V,NPO,6.5X3.0.5	
C909	2301-000201	C-FILM,PEF	2.2NF,5%,50V,7.4X3.9X13MM	
C910	2401-001264	C-AL	4.7UF,20%,50V,BP,6X11MM,5	
C912	2201-000234	C-CERAMIC,DISC	150PF,5%,50V,NPO,10X3.5.5	
C913	2301-000108	C-FILM,PEF	1.5NF,5%,50V,6.5X3.0X5.5M	
C914	2305-000665	C-FILM,MPEF	100NF,5%,63V,7.5X4.0X5.0M	
C915	2305-000665	C-FILM,MPEF	100NF,5%,63V,7.5X4.0X5.0M	
C916	2301-000107	C-FILM,PEF	1.5NF,5%,100V,6.5X3.0X5.5	
C917	2401-000269	C-AL	100UF,20%,16V,GP,6X11MM,5	
C918	2201-000193	C-CERAMIC,DISC	10PF,0.3PF,50V,NPO,-,5,T	
C920	2202-000109	C-CERAMIC,MLC-AXIAL	100NF,+80-20%,50V,Y5P,1.9	
C921	2202-000109	C-CERAMIC,MLC-AXIAL	100NF,+80-20%,50V,Y5P,1.9	
C922	2401-001495	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C903	2202-000127	C-CERAMIC,MLC-AXIAL	10NF,+80-20%,25V,Y5V,-,7.	
CK01	2202-000127	C-CERAMIC,MLC-AXIAL	10NF,+80-20%,25V,Y5V,-,7.	
CK03	2401-000947	C-AL	22UF,20%,35V,GP,5X11MM,-	
CK04	2401-001271	C-AL	4.7UF,20%,50V,GP,5X11MM,5	
CK05	2401-001271	C-AL	4.7UF,20%,50V,GP,5X11MM,5	
CK06	2401-001271	C-AL	4.7UF,20%,50V,GP,5X11MM,5	
CK07	2201-000573	C-CERAMIC,DISC	47PF,5%,50V,NPO,6.5X3.0.5	
CN501	AA39-20122A	LEAD-CONNECTOR,ASSY	-,YBNH025-08,YBNH025-05/0	
CN601	3711-002642	CONNECTOR-HEADER	BOX,3P,1R,2.5MM,STRAIGHT,	
CN603	3711-002643	CONNECTOR-HEADER	BOX,4P,1R,2.5MM,STRAIGHT,	
CN701	3711-002648	CONNECTOR-HEADER	BOX,9P,1R,2.5MM,STRAIGHT,	
CN802	AA27-20002A	COIL-DEGAUSSING	-,20",13.5OHM,35T,L2300.E	
CT01	2202-000109	C-CERAMIC,MLC-AXIAL	100NF,+80-20%,50V,Y5P,1.9	
CT02	2202-000109	C-CERAMIC,MLC-AXIAL	100NF,+80-20%,50V,Y5P,1.9	
CT04	2202-000109	C-CERAMIC,MLC-AXIAL	100NF,+80-20%,50V,Y5P,1.9	
CU01	2401-001495	C-AL	47UF,20%,16V,GP,5X11MM,5M	
CW901	2503-000156	C-NETWORK	100PFX4,20%,50V	
D101	1203-000451	IC-VOLTAGE REGULATOR	33,TO-92,3P,-,PLASTIC,31/	
D201	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D202	0402-000216	DIODE-RECTIFIER	ERC24-06,600V,1.0A,DO-204	
D204	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D401	0402-000129	DIODE-RECTIFIER	1N4003,200V,1A,DO-41	
D402	0402-000129	DIODE-RECTIFIER	1N4003,200V,1A,DO-41	
D403	0402-000546	DIODE-RECTIFIER	TVR106,400V,1.0A,DO-41	
D404	0402-000493	DIODE-RECTIFIER	1R5GU41,400V,1.5A,DO-15L,	
D405	0402-000546	DIODE-RECTIFIER	TVR106,400V,1.0A,DO-41	
D406	0402-000546	DIODE-RECTIFIER	TVR106,400V,1.0A,DO-41	
D501	0402-000216	DIODE-RECTIFIER	ERC24-06,600V,1.0A,DO-204	
D800	1405-000152	VARISTOR	560V,2500A,14X8.5MM,TP	
D801	0402-000102	DIODE-BRIDGE	D2SB80,600V,1.5A,-	

Loc	Part-No	Description	Specification	Remarks
D802	0402-000540	DIODE-RECTIFIER	RU20A,600V,1.5A,-	
D803	0402-000430	DIODE-RECTIFIER	FML-G02S,200V,3.0A,TO-220	
D804	1405-000152	VARISTOR	560V,2500A,14X8.5MM,TP	
D901	0403-000295	DIODE-ZENER	MTZ5.1B,5.1V,4.94-5.20V,5	
D902	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D903	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D904	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D905	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8	
D909	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
D910	0403-000296	DIODE-ZENER	MTZ5.6B,5.6V,5.45-5.73V,5	
D911	0402-000129	DIODE-RECTIFIER	1N4003,200V,1A,DO-41	
D912	0401-000005	DIODE-SWITCHING	1N4148,75V,300MA,500MW,4.	
DZ105	0403-000690	DIODE-ZENER	MTZ10C,10V,9.7-10.2V,500M	
DZ106	0403-000690	DIODE-ZENER	MTZ10C,10V,9.7-10.2V,500M	
DZ107	0403-000690	DIODE-ZENER	MTZ10C,10V,9.7-10.2V,500M	
DZ108	0403-000296	DIODE-ZENER	MTZ5.6B,5.6V,5.45-5.73V,5	
DZ109	0403-000296	DIODE-ZENER	MTZ5.6B,5.6V,5.45-5.73V,5	
DZ201	0403-000295	DIODE-ZENER	MTZ5.1B,5.1V,4.94-5.20V,5	
DZ202	0403-000295	DIODE-ZENER	MTZ5.1B,5.1V,4.94-5.20V,5	
DZ401	0403-000563	DIODE-ZENER	MTZ9.1B,9.1V,8.57-9.01V,5	
DZ702	0403-000563	DIODE-ZENER	MTZ9.1B,9.1V,8.57-9.01V,5	
DZ801	0403-000691	DIODE-ZENER	R2K,170-200V,-,170V,TP,-	
DZ901	0403-000563	DIODE-ZENER	MTZ9.1B,9.1V,8.57-9.01V,5	
DZ902	0403-000295	DIODE-ZENER	MTZ5.1B,5.1V,4.94-5.20V,5	
DZ903	0403-000299	DIODE-ZENER	MTZ7.5C,7.5V,7.29-7.67V,5	
DZ904	0403-000295	DIODE-ZENER	MTZ5.1B,5.1V,4.94-5.20V,5	
DZ905	0403-000296	DIODE-ZENER	MTZ5.6B,5.6V,5.45-5.73V,5	
F801	3601-000261	FUSE-FERRULE	250V,3.15L,TIME LAG,GLASS	
F801A	3602-000114	FUSE-HOLDER	-,30MOHM	
F801B	3602-000114	FUSE-HOLDER	-,30MOHM	
GT01	AA39-20010H	LEAD-CONNECTOR,ASSY	-,YFH800-01,S,1P,300,1617	
HC101	AA13-20004A	IC-HYBRID	-,PAP102,SIP,6P,PHE-AMP	
HC201	AA13-20004J	IC-HYBRID	-,VLT104T,SIP,5P,VERTICAL	
HCR01	AA13-20004M	IC-HYBRID	DP,HIS0169C,SIP,7P,SMPS C	
IC201	1204-001153	IC-DEF. PROCESSOR	MS2777SPB,DIP,52P,-,PLAST	
IC202	1209-000214	IC-DELAY LINE	TD4665,DIP,16P,300MIL,PL	
IC203	1204-000524	IC-DECODER	TD4839SP/N1,DIP,16P,-,PLA	
IC301	1204-000441	IC-IF CIRCUIT	TD48356,SIP,9P,-,PLASTIC,	
IC501	1201-000502	IC-VIDEO AMP	6103,ZIP,9P,-,SINGLE,-,PL	
IC601	1201-000535	IC-AUDIO AMP	7056,SIP,9P,-,SINGLE,40.5	
IC801	AA13-20004P	IC-HYBRID	DP,SMR4020C,SIP,5P,SMPS	
IC802	1203-000644	IC-POS.FIXED REG.	7630,SIP,10P,-,PLASTIC,5.	
IC804	1203-000274	IC-POS.FIXED REG.	7805,TO-220,3P,-,PLASTIC,	
IC805	1203-000243	IC-POS.FIXED REG.	7812A,TO-220,3P,-,PLASTIC	
IC901	AA13-30010W	IC-MCU	-,SAA5290ZP-043,8BIT,SDIP	
IC902	1103-000156	IC-EEPROM	24C04,512X8BIT,DIP,8P,300	
ICX01	1204-000459	IC-DEMODULATOR	TD4445B,DIP,16P,-,PLASTI	
JS701	3722-000183	JACK-RCA	21P,4MM,SN,BLACK,-	
L101	2701-000101	INDUCTOR-AXIAL	1.2UH,10%,2.5X3.4MM	
L102	2701-000114	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L201	2701-000197	INDUCTOR-AXIAL	5.6UH,10%,2.5X3.4MM	
L203	2701-000146	INDUCTOR-AXIAL	2.2UH,10%,2.5X3.4MM	
L204	2701-000197	INDUCTOR-AXIAL	5.6UH,10%,2.5X3.4MM	
L205	2701-000114	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L206	2701-000158	INDUCTOR-AXIAL	22UH,10%,2.5X3.4MM	
L207	2701-000114	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L208	2701-000114	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L301	2701-000142	INDUCTOR-AXIAL	1UH,10%,2.5X3.4MM	
L302	2701-000142	INDUCTOR-AXIAL	1UH,10%,2.5X3.4MM	
L303	2701-000116	INDUCTOR-AXIAL	10UH,10%,4.2X9.8MM	
L304	2701-000116	INDUCTOR-AXIAL	10UH,10%,4.2X9.8MM	
L401	AA27-30001B	COIL-LINEARITY	-,195UH,Q1C1010,P10,4,4.5	
L402	AA27-10002Y	COIL-CHOKE	-,100UH,K,10,700MA,T,100U	

Loc	Part-No	Description	Specification	Remarks
L701	AA27-10003X	COIL-CHOKE	- .4.7UH,K,40,190MA,TP,ALO	
L703	AA27-10003X	COIL-CHOKE	- .4.7UH,K,40,190MA,TP,ALO	
L704	2901-000297	FILTER-EMI ON BOARD	- .3A,-,-.3.5X5,TP,-	
L801	AA29-30001C	FILTER-LINE	- .39MH,1.0A,-,-	
L802	2901-000298	FILTER-EMI ON BOARD	- .6A,-,-.9X7.5,TP,-	
L803	AA27-90001G	COIL-RESONUBBER	RS207,500UH,CO4X2X6,39UVS	
L805	2901-000298	FILTER-EMI ON BOARD	- .6A,-,-.9X7.5,TP,-	
L806	2701-000141	INDUCTOR-AXIAL	1MH,5%,2.8X7MM	
L807	2901-000298	FILTER-EMI ON BOARD	- .6A,-,-.9X7.5,TP,-	
L809	AA27-10002Y	COIL-CHOKE	- .100UH,K,10,700MA,T,100U	
L901	2701-000197	INDUCTOR-AXIAL	5.6UH,10%,2.5X3.4MM	
L904	2701-000114	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L906	2901-000299	FILTER-EMI ON BOARD	- .6A,UL/CSA,-.9X7.5,TP,-	
L907	2901-000297	FILTER-EMI ON BOARD	- .3A,-,-.3.5X5,TP,-	
L908	2701-000189	INDUCTOR-AXIAL	470NH,10%,2.5X3.4MM	
L9901	AA96-30001B	ASSY-LED,GUIDE	-,AA61-50055A,DL-GSRGA,-	
NT801	1404-000187	THERMISTOR-NTC	4.7OHM,15%,2800K,27.2MW/C	
P801	1404-000180	THERMISTOR-PTC	14OHM,20%,-.290V,25A,-,ST	
Q201	0501-000389	TR-SMALL SIGNAL	KSC815-Y,NPN,60V,45V,200M	
Q251	0501-000283	TR-SMALL SIGNAL	KSA539-Y,NPN,400MW,TO-92,	
Q401	0502-000295	TR-POWER	KS05072YD,NPN,1500V,800V,	
Q402	0501-000369	TR-SMALL SIGNAL	KSC2331-Y,NPN,1W,TO-92L,-	
Q701	0501-000389	TR-SMALL SIGNAL	KSC815-Y,NPN,60V,45V,200M	
Q702	0501-000389	TR-SMALL SIGNAL	KSC815-Y,NPN,60V,45V,200M	
Q703	0501-000389	TR-SMALL SIGNAL	KSC815-Y,NPN,60V,45V,200M	
Q901	0501-000389	TR-SMALL SIGNAL	KSC815-Y,NPN,60V,45V,200M	
Q902	0501-000389	TR-SMALL SIGNAL	KSC815-Y,NPN,60V,45V,200M	
Q903	0501-000389	TR-SMALL SIGNAL	KSC815-Y,NPN,60V,45V,200M	
Q904	0504-000123	TR-DIGITAL	KSR1010,NPN,300MW,10K,TO-	
Q905	0504-000123	TR-DIGITAL	KSR1010,NPN,300MW,10K,TO-	
Q906	0504-000123	TR-DIGITAL	KSR1010,NPN,300MW,10K,TO-	
Q907	0504-000125	TR-DIGITAL	KSR1012,NPN,300MW,47K,TO-	
Q908	0504-000123	TR-DIGITAL	KSR1010,NPN,300MW,10K,TO-	
Q909	0504-000125	TR-DIGITAL	KSR1012,NPN,300MW,47K,TO-	
Q101	0504-000123	TR-DIGITAL	KSR1010,NPN,300MW,10K,TO-	
Q102	0501-000389	TR-SMALL SIGNAL	KSC815-Y,NPN,60V,45V,200M	
Q103	0504-000123	TR-DIGITAL	KSR1010,NPN,300MW,10K,TO-	
R101	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8	
R102	2001-000548	R-CARBON	270KOHM,5%,1/8W,AA,TP,1.8	
R103	2001-000548	R-CARBON	270KOHM,5%,1/8W,AA,TP,1.8	
R202	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X	
R203	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X	
R205	2001-000241	R-CARBON	1.5KOHM,5%,1/8W,AA,TP,1.8	
R206	2001-000241	R-CARBON	1.5KOHM,5%,1/8W,AA,TP,1.8	
R208	2004-001140	R-METAL	6.8KOHM,5%,1/8W,AA,TP,1.8	
R209	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R210	2001-000331	R-CARBON	12KOHM,5%,1/8W,AA,TP,1.8X	
R211	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8	
R212	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
R213	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
R214	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
R215	2004-001027	R-METAL	5.6KOHM,5%,1/8W,AA,TP,1.8	
R216	2004-001027	R-METAL	5.6KOHM,5%,1/8W,AA,TP,1.8	
R217	2001-000508	R-CARBON	220KOHM,5%,1/8W,AA,TP,1.8	
R218	2001-000755	R-CARBON	430KOHM,5%,1/8W,AA,TP,1.8	
R219	2001-000515	R-CARBON	220OHM,5%,1/8W,AA,TP,1.8X	
R220	2001-000591	R-CARBON	3.3KOHM,5%,1/8W,AA,TP,1.8	
R221	2001-000832	R-CARBON	510OHM,5%,1/8W,AA,TP,1.8X	
R222	2001-000780	R-CARBON	470OHM,5%,1/8W,AA,TP,1.8X	
R223	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X	
R225	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R226	2001-000508	R-CARBON	220KOHM,5%,1/8W,AA,TP,1.8	
R227	2001-000008	R-CARBON	15KOHM,5%,1/8W,AA,TP,1.8X	

Loc	Part-No	Description	Specification	Remarks
R228	2001-000258	R-CARBON	1.8KOHM,5%,1/8W,AA,TP,1.8	
R229	2001-000258	R-CARBON	1.8KOHM,5%,1/8W,AA,TP,1.8	
R230	2001-000258	R-CARBON	1.8KOHM,5%,1/8W,AA,TP,1.8	
R231	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8	
R232	2004-001185	R-METAL	680KOHM,5%,1/8W,AA,TP,1.8	
R233	2001-001107	R-CARBON(S)	220OHM,5%,1/2W,AA,TP,2.4X	
R234	2004-001993	R-METAL	750KOHM,5%,1/8W,AA,TP,1.8	
R235	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R236	2001-000302	R-CARBON	100HM,5%,1/8W,AA,TP,1.8X3	
R251	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
R252	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8	
R253	2001-001411	R-CARBON	5.6MOHM,5%,1/8W,AA,TP,1.7	
R256	2001-000780	R-CARBON	470OHM,5%,1/8W,AA,TP,1.8X	
R257	2001-000302	R-CARBON	100HM,5%,1/8W,AA,TP,1.8X3	
R258	2001-000508	R-CARBON	220KOHM,5%,1/8W,AA,TP,1.8	
R259	2001-000548	R-CARBON	270KOHM,5%,1/8W,AA,TP,1.8	
R300	2008-000254	R-FUSIBLE(S)	0.68OHM,5%,2W,AF,TP,3.9X1	
R301	2004-001402	R-METAL(S)	6.8KOHM,1%,1/2W,AA,TP,2.4	
R302	2001-001048	R-CARBON(S)	1.2OHM,5%,1/2W,AA,TP,2.4X	
R303	2001-000085	R-CARBON(S)	100KOHM,5%,1/2W,AA,TP,2.4	
R304	2001-000019	R-CARBON(S)	100HM,5%,1/2W,AA,TP,2.4X6	
R306	2003-000652	R-METAL OXIDE(S)	330OHM,5%,2W,AF,TP,4X12MM	
R401	2001-000780	R-CARBON	470OHM,5%,1/8W,AA,TP,1.8X	
R402	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
R403	2001-001114	R-CARBON(S)	270OHM,5%,1/2W,AA,TP,2.4X	
R404	2008-000183	R-FUSIBLE(S)	100HM,5%,1W,AA,TP,3.9X10M	
R405	2003-000540	R-METAL OXIDE(S)	1KOHM,5%,2W,AF,TP,4X12MM	
R406	2008-000299	R-FUSIBLE	47OHM,5%,2W,AF,TP,3.9X10M	
R407	2004-002011	R-METAL(S)	110KOHM,1%,1/2W,AA,TP,2.4	
R408	2001-001410	R-CARBON(S)	430HM,5%,1/2W,AA,TP,2.4X6	
R409	2008-000204	R-FUSIBLE(S)	0.22OHM,10%,1/2W,AF,TP,2.	
R410	2008-000206	R-FUSIBLE(S)	1OHM,5%,1/2W,AF,TP,2.5X6.	
R411	2004-002011	R-METAL(S)	110KOHM,1%,1/2W,AA,TP,2.4	
R412	2003-001035	R-METAL OXIDE(S)	27OHM,5%,2W,AF,TP,2.4X6.4	
R413	2001-003019	R-CARBON(S)	0.39OHM,10%,1/2W,AA,TP,2.	
R414	2001-000022	R-CARBON(S)	33OHM,5%,1/2W,AA,TP,2.4X6	
R415	2001-001182	R-CARBON(S)	7.5KOHM,5%,1/2W,AA,TP,2.4	
R416	2008-000299	R-FUSIBLE	47OHM,5%,2W,AF,TP,3.9X10M	
R417	2008-001005	R-FUSIBLE	0.47OHM,10%,1W,AA,TP,4.7X	
R418	2003-000784	R-METAL OXIDE(S)	7.5KOHM,5%,2W,AF,TP,4X12M	
R419	2008-000277	R-FUSIBLE	68OHM,5%,1/2W,AA,TP,4.7X1	
R420	2001-001410	R-CARBON(S)	430HM,5%,1/2W,AA,TP,2.4X6	
R501H	2002-000330	R-COMPOSITION	4.7KOHM,10%,1/2W,AA,TP,3.	
R502H	2002-000330	R-COMPOSITION	4.7KOHM,10%,1/2W,AA,TP,3.	
R503	2002-000330	R-COMPOSITION	4.7KOHM,10%,1/2W,AA,TP,3.	
R504	2001-001194	R-CARBON(S)	82KOHM,5%,1/2W,AA,TP,2.4X	
R505	2001-001194	R-CARBON(S)	82KOHM,5%,1/2W,AA,TP,2.4X	
R506	2001-001194	R-CARBON(S)	82KOHM,5%,1/2W,AA,TP,2.4X	
R507	2001-000232	R-CARBON	1.3KOHM,5%,1/8W,AA,TP,1.8	
R508	2001-001106	R-CARBON(S)	220KOHM,5%,1/2W,AA,TP,2.4	
R509	2001-000857	R-CARBON	560OHM,5%,1/8W,AA,TP,1.8X	
R510	2001-000857	R-CARBON	560OHM,5%,1/8W,AA,TP,1.8X	
R511	2001-000857	R-CARBON	560OHM,5%,1/8W,AA,TP,1.8X	
R512	2001-000258	R-CARBON	1.8KOHM,5%,1/8W,AA,TP,1.8	
R513	2001-000258	R-CARBON	1.8KOHM,5%,1/8W,AA,TP,1.8	
R514	2001-000258	R-CARBON	1.8KOHM,5%,1/8W,AA,TP,1.8	
R516	2001-001062	R-CARBON(S)	10MOHM,5%,1/2W,AA,TP,2.4X	
R517	2008-000264	R-FUSIBLE(S)	1OHM,5%,1W,AF,TP,3.9X10MM	
R602	2001-000221	R-CARBON	1.2KOHM,5%,1/8W,AA,TP,1.8	
R605	2004-001126	R-METAL	6.2KOHM,1%,1/8W,AA,TP,1.8	
R606	2001-000019	R-CARBON(S)	10OHM,5%,1/2W,AA,TP,2.4X6	
R607	2001-000019	R-CARBON(S)	10OHM,5%,1/2W,AA,TP,2.4X6	
R608	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8	

Loc	Part-No	Description	Specification	Remarks
CE06	2202-000862	C-CERAMIC,MLC-AXIAL	390PF,10%,50V,V5P,3.5X1.9	
CE07	2202-000222	C-CERAMIC,MLC-AXIAL	3.3NF,20%,16V,V5P,-,7.5,T	
JA702	3722-000506	JACK-RCA	2P,3.6MM,-,AG	
JE601	3722-000143	JACK-PHONE	1P,3.4MM,MDAG,BLACK,-	
QE01	0501-000283	TR-SMALL SIGNAL	KSAS39-Y,PNP,400MW,T0-92,	
RE01	2001-001153	R-CARBON(S)	470HM,5%,1/2W,AA,TP,2.4X6	
RE02	2001-001153	R-CARBON(S)	470HM,5%,1/2W,AA,TP,2.4X6	
RE03	2004-001201	R-METAL	68KOHM,5%,1/8W,AA,TP,1.8X	
RE04	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
RE05	2001-000009	R-CARBON	20KOHM,5%,1/8W,AA,TP,1.8X	

ASSY-SPEAKER

3001-000003	SPEAKER	3W,160HM,88+-20B,180+-36H
AA39-20500C	LEAD CONNECTOR-ASSY	-,67096-003,REC,3(2),600.

ASSY-POWER, CORD



AA39-10001G	POWER-CORD	-,KKP-419C,KLCE-2F,2.286M
AA61-20070A	HOLDER-CORD	-, -,PP,V0,BLK,KE-0002

REMOCON

* AA59-10076P	REMOCON	-,TW48,SPW153,38,L/GRY,SS
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ASSY-CRT



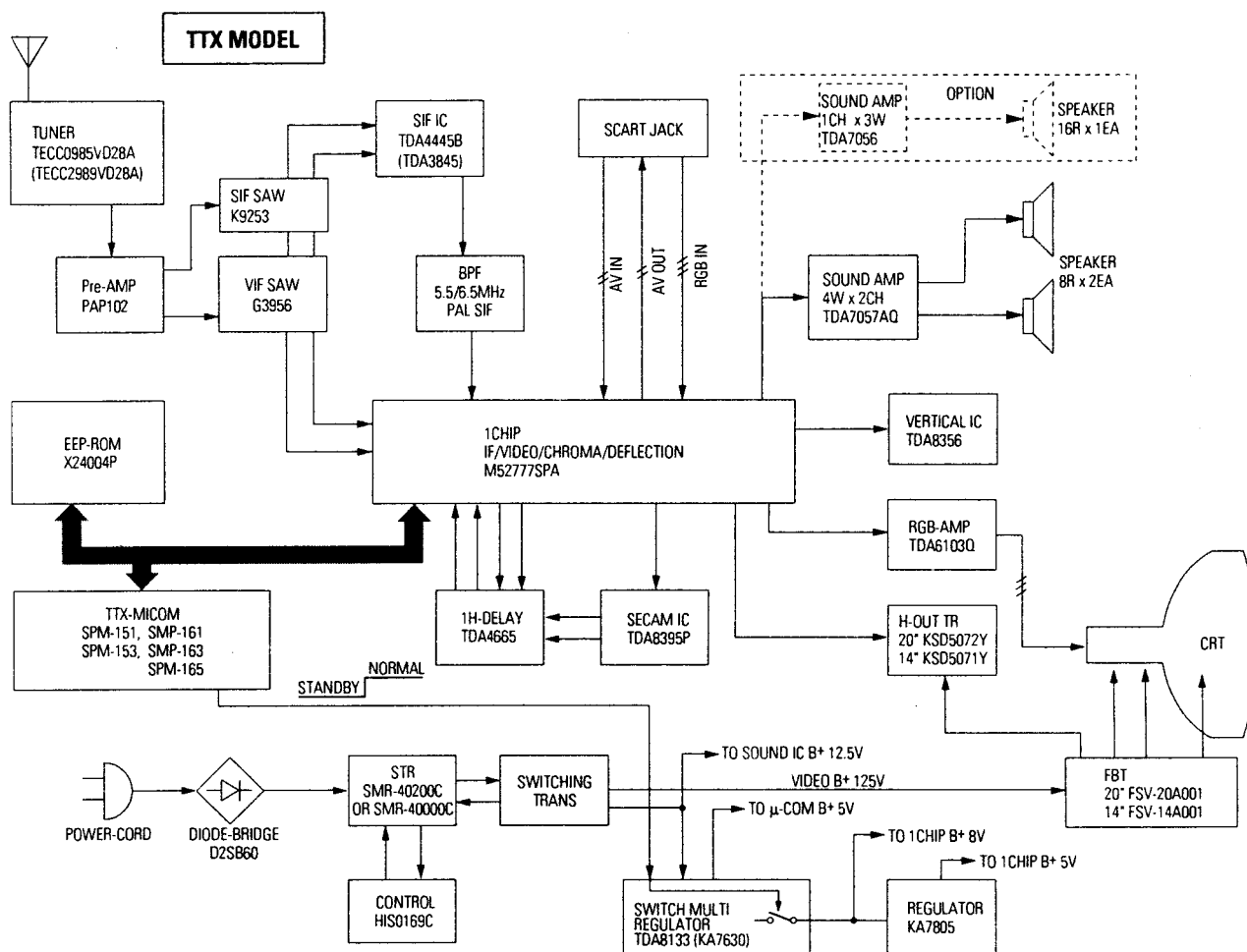
AA03-10003L	CRT-COLOR	-,A48KRD82X(U),+380MG,20"
AA27-50001S	DEFLECTION-YOKE	-,DSE-1992LL(1),20"/A48KR
AA27-60001K	MAGNET-CONVERGENCE	-,NY-291,29.1MM
AA63-60028A	SPACER-DY	NEOPRENE,-,BLK,V0 W12,-,-

ASSY-ACCESSORY

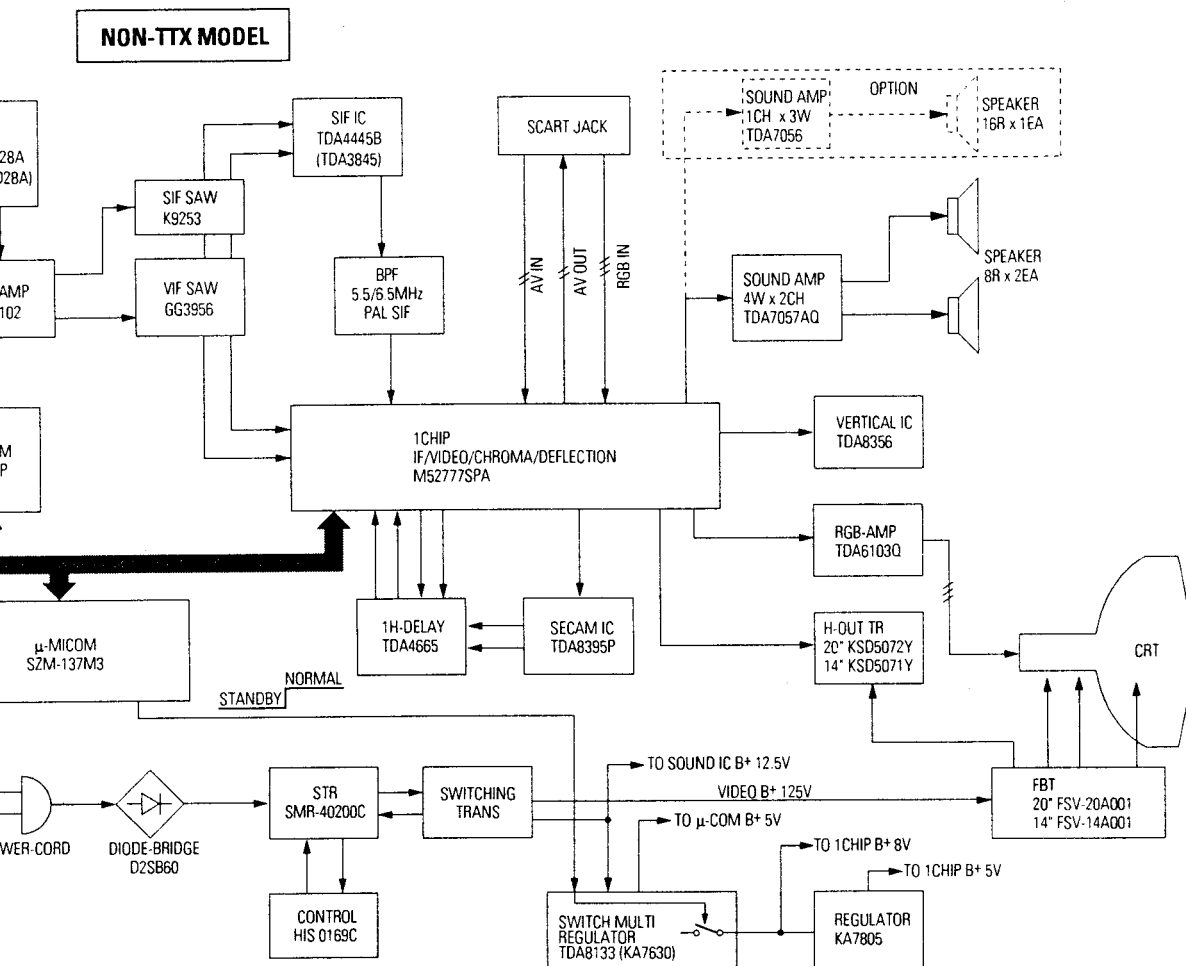
AA68-10907A	MANUAL-USERS	SCT118,W/P 100(G),A4,ENG,
AA68-10914A	MANUAL-USERS	SCT118,W/P 100(G),A4,RUSS

8. Block Diagram

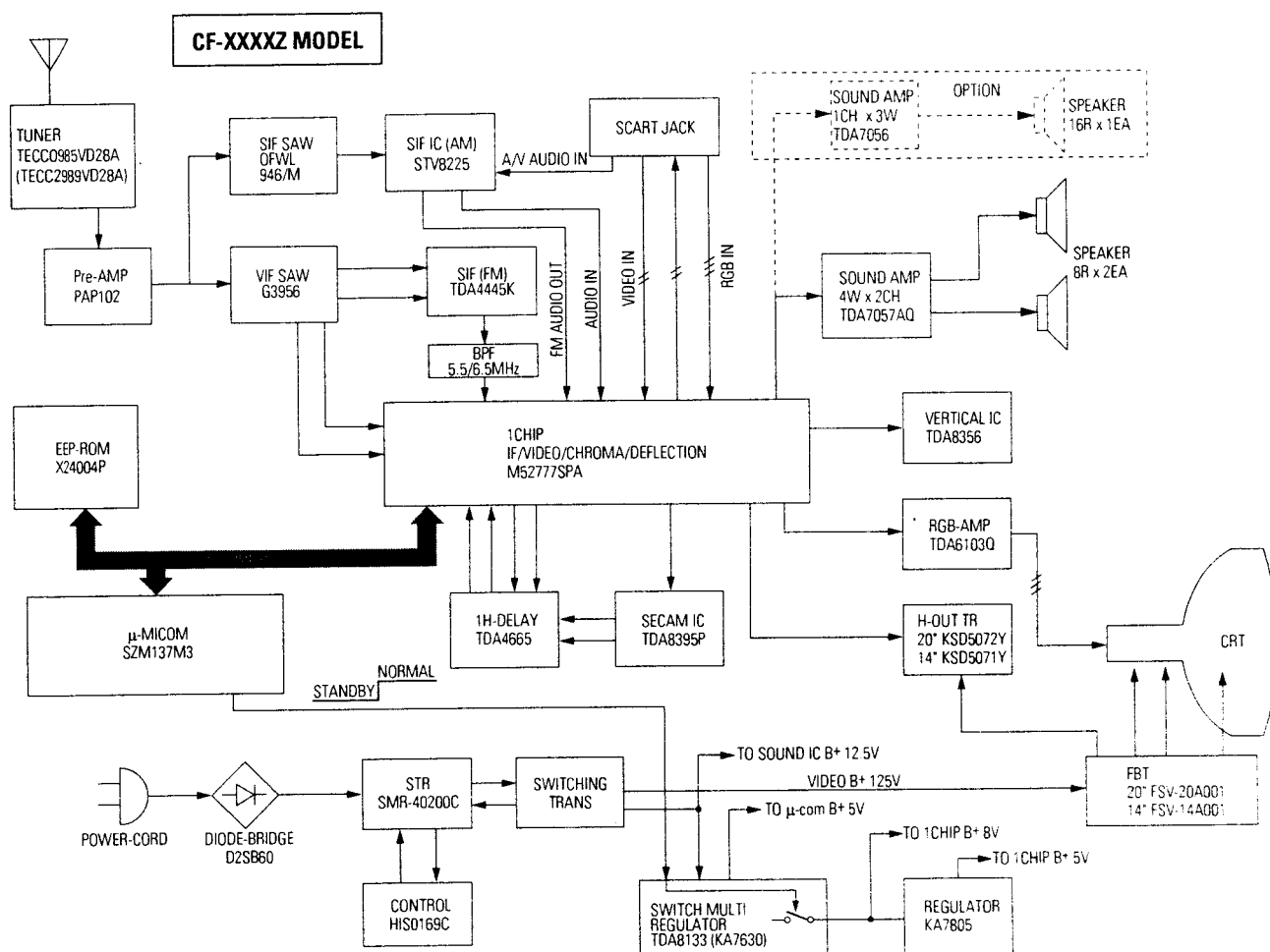
8-1 TTX MODEL



NON-TTX MODEL



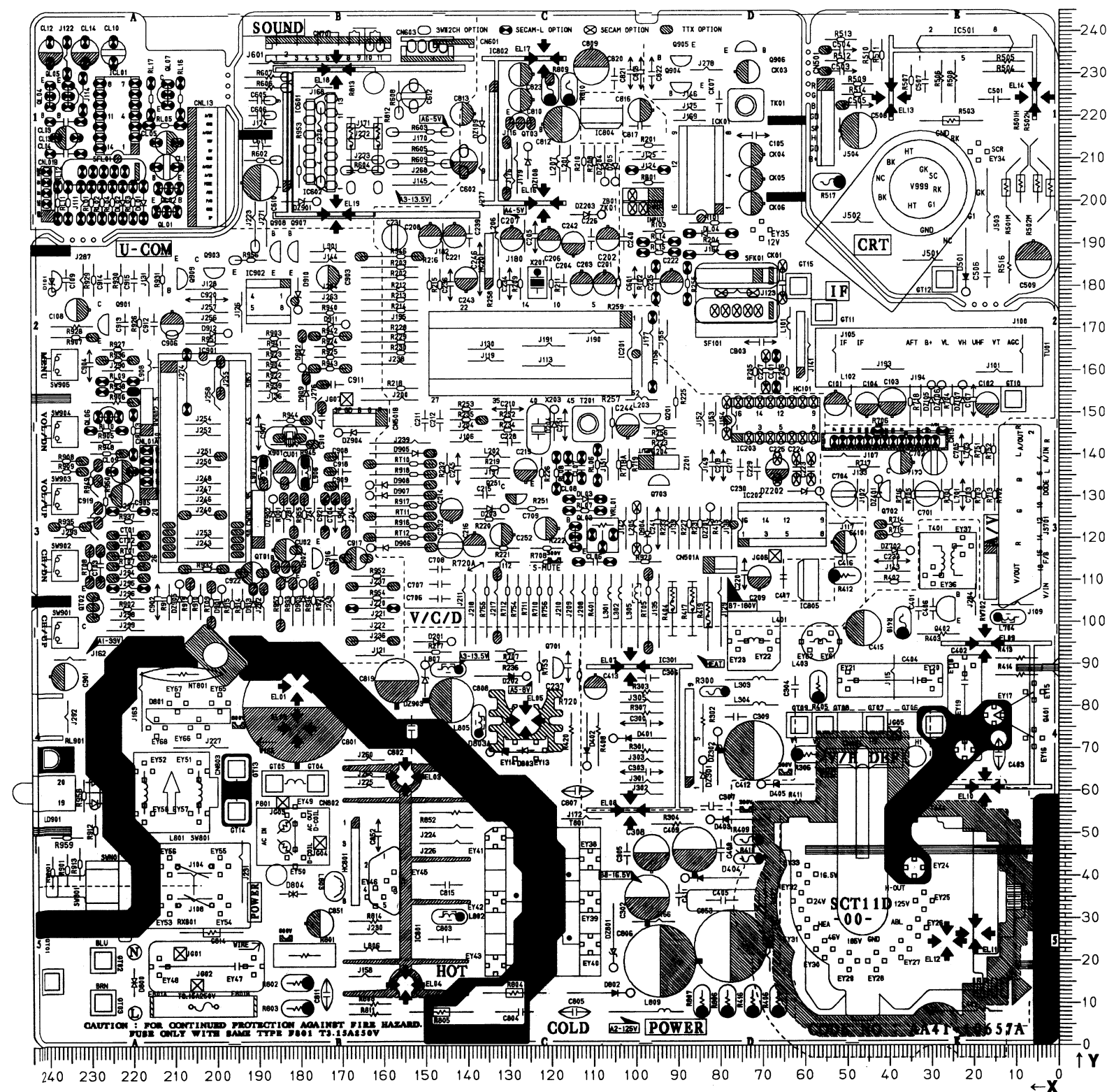
8-3 CF-XXXXZ MODEL



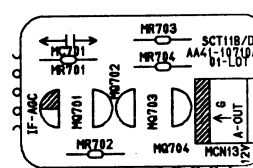
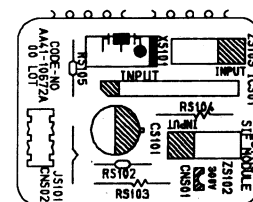
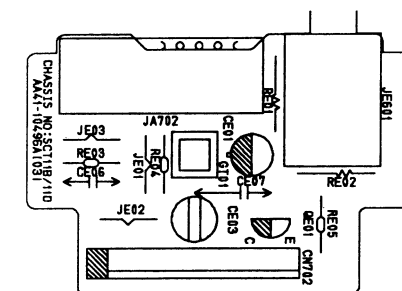
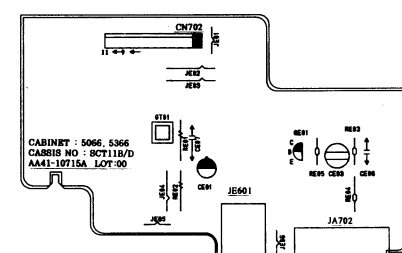
MEMO

9. PCB Layout Diagram

9-1 PCB MAIN



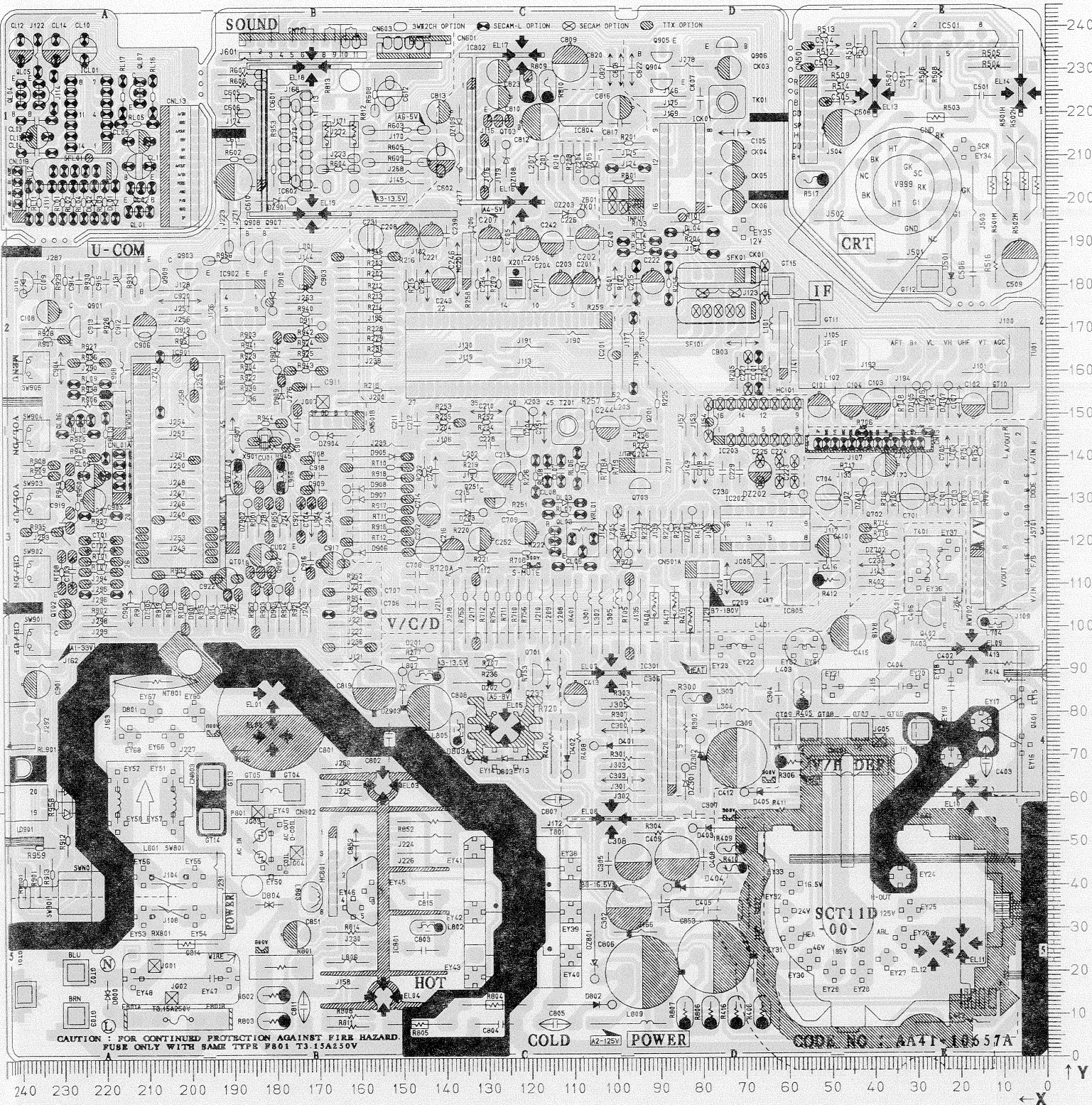
PCB A/V.FRONT



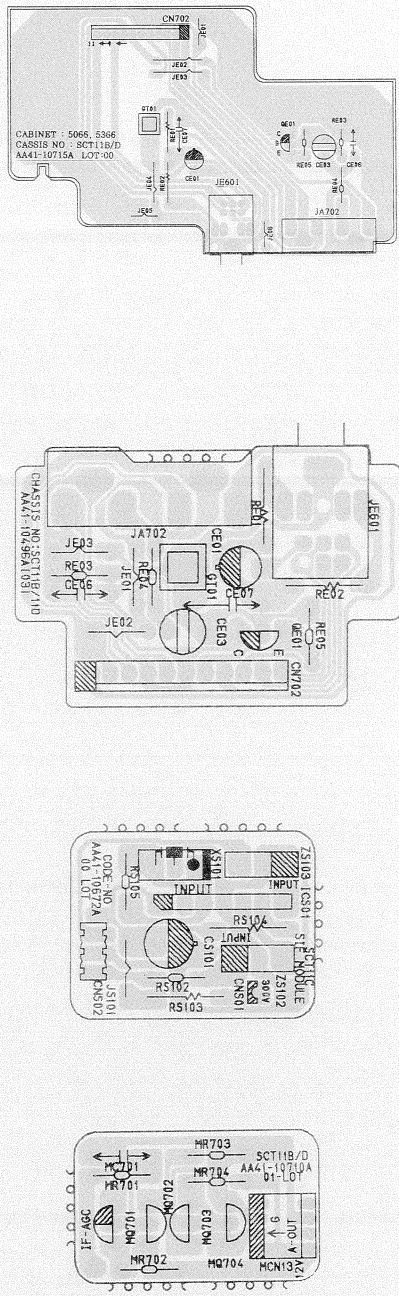
LOC NO	X	Y	LOC NO	X	Y
DIODE			TRANSISTOR		
D101	239	179	Q201	99	149
D201	144	95	Q251	131	130
D202	126	87	Q401	17	94
D203	131	127	Q402	26	105
D204	119	151	Q701	119	86
D205	105	204	Q702	40	133
D401	105	72	Q703	92	132
D402	111	66	Q901	226	174
D403	82	53	Q902	177	113
D404	88	39	Q903	203	184
D405	70	61	Q904	92	228
D501	22	178	Q905	92	234
D800	220	19	Q906	71	235
D801	214	75	Q907	180	191
D802	101	12	Q908	185	191
D803	126	76	Q909	209	179
D803A	134	69	QL01	209	198
D804	178	36	QL02	214	203
D901	199	108	QL03	114	123
D902	179	161	QL04	240	222
D903	179	109	QL05	235	222
D904	97	117	QL06	223	149
D905	149	140	QL07	211	228
D906	163	118	QT01	186	113
D907	163	130	QT02	229	101
D908	163	133	QT03	125	218
D910	180	174	IC		
D911	169	171	HC101	61	159
D912	197	169	HC201	135	181
D913	191	108	HC801	167	52
DL01	217	196	IC201	103	156
DL02	222	196	IC202	74	127
DL03	108	129	IC203	76	152
DL04	87	192	IC301	101	89
DZ105	30	156	IC501	39	224
DZ106	27	156	IC601	183	204
DZ107	22	156	IC602	171	197
DZ108	125	213	IC801	155	14
DZ109	136	214	IC802	122	199
DZ201	82	127	IC804	110	219
DZ202	56	131	IC805	59	112
DZ203	108	197	IC901	195	161
DZ204	107	204	IC902	184	172
DZ301	84	67	ICK01	89	198
DZ302	80	74	ICL01	228	213
DZ401	42	134			
DZ702	35	117			
DZ801	105	18			
DZ901	176	200			
DZ902	186	129			
DZ903	150	90			
DZ904	171	145			
DZ905	209	109			

9. PCB Layout Diagram

9-1 PCB MAIN

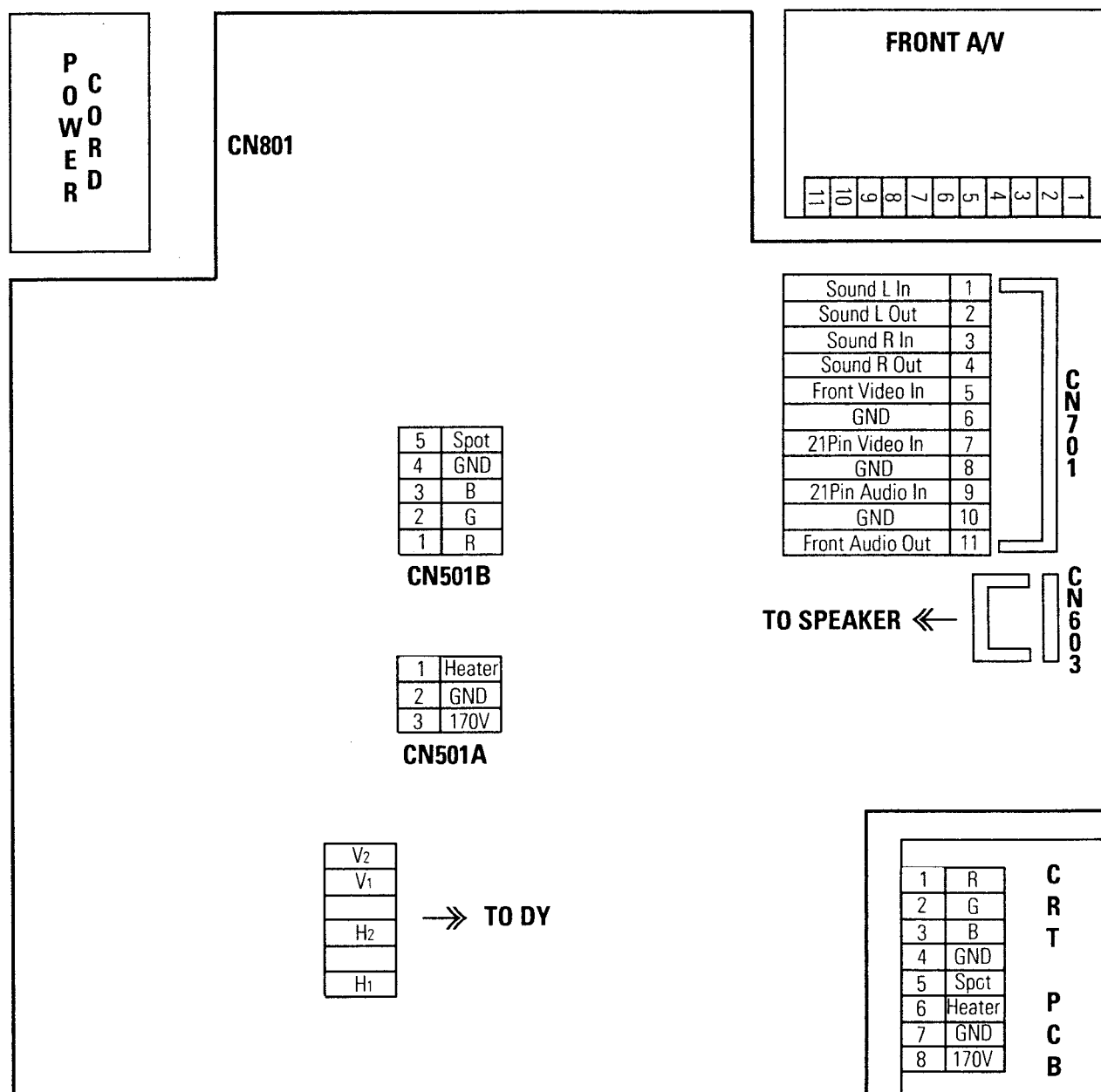


PCB A/V.FRONT



LOC' NO	X	Y	LOC' NO	X	Y
DIODE			TRANSISTOR		
D101	239	179	Q201	99	149
D201	144	95	Q251	131	130
D202	126	87	Q401	17	94
D203	131	127	Q402	26	105
D204	119	151	Q701	119	86
D205	105	204	Q702	40	133
D401	105	72	Q703	92	132
D402	111	66	Q901	226	174
D403	82	53	Q902	177	113
D404	88	39	Q903	203	184
D405	70	61	Q904	92	228
D501	22	178	Q905	92	234
D800	220	19	Q906	71	235
D801	214	75	Q907	180	191
D802	101	12	Q908	185	191
D803	126	76	Q909	209	179
D803A	134	69	QL01	209	198
D804	178	36	QL02	214	203
D901	199	108	QL03	114	123
D902	179	161	QL04	240	222
D903	179	109	QL05	235	222
D904	97	117	QL06	223	149
D905	149	140	QL07	211	228
D906	163	118	QT01	186	113
D907	163	130	QT02	229	101
D908	163	133	QT03	125	218
D910	180	174	I C		
D911	169	171	HC101	61	159
D912	197	169	HC201	135	181
D913	191	108	HC801	167	52
DL01	217	196	IC201	103	156
DL02	222	196	IC202	74	127
DL03	108	129	IC203	76	152
DL04	87	192	IC301	101	89
DZ105	30	156	IC501	39	224
DZ106	27	156	IC601	183	204
DZ107	22	156	IC602	171	197
DZ108	125	213	IC801	155	14
DZ109	136	214	IC802	122	199
DZ201	82	127	IC804	110	219
DZ202	56	131	IC805	59	112
DZ203	108	197	IC901	195	161
DZ204	107	204	IC902	184	172
DZ301	84	67	ICK01	89	198
DZ302	80	74	ICL01	228	213
DZ401	42	134			
DZ702	35	117			
DZ801	105	18			
DZ901	176	200			
DZ902	186	129			
DZ903	150	90			
DZ904	171	145			
DZ905	209	109			

10. Wiring Diagram

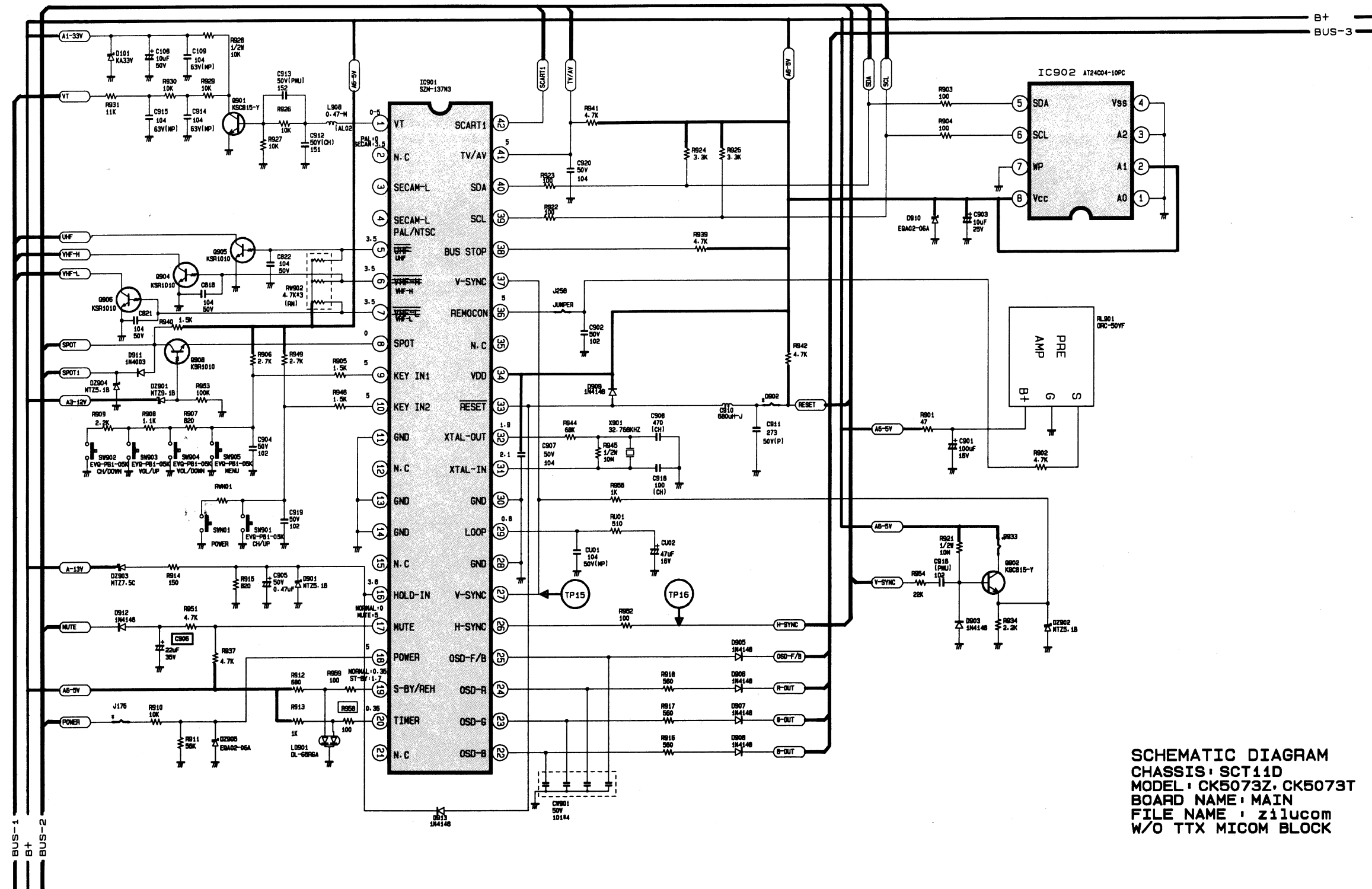


Memo

[illegible]

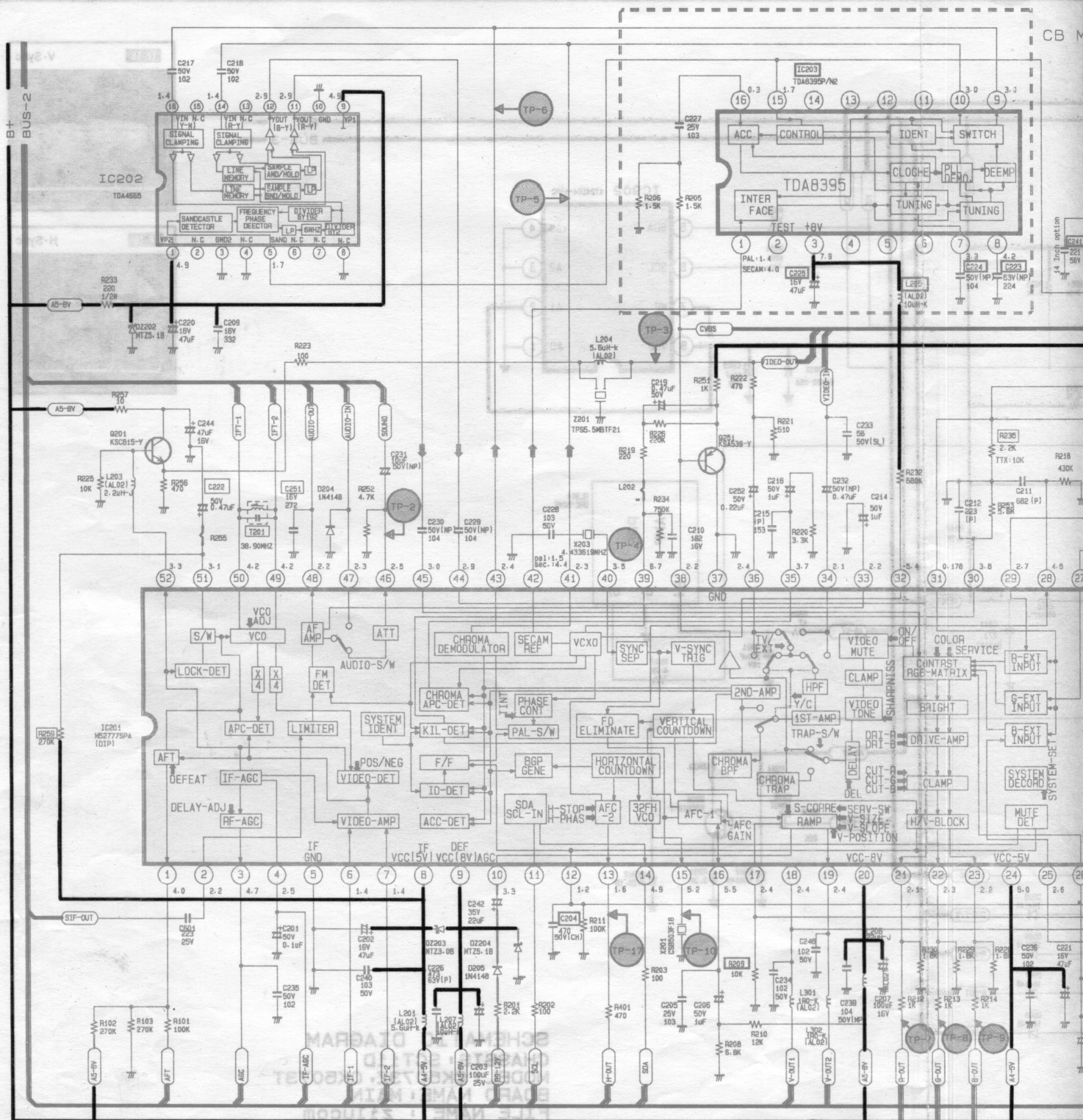
11. Schematic Diagrams

11-1 W/O TTX Micom



SCHEMATIC DIAGRAM
CHASSIS: SCT11D
MODEL: CK5073Z, CK5073T
BOARD NAME: MAIN
FILE NAME: z11ucom
W/O TTX MICOM BLOCK

11-2 ONECHIP/CHROMA BLOCK



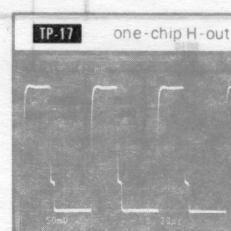
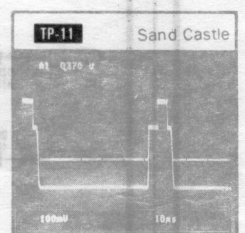
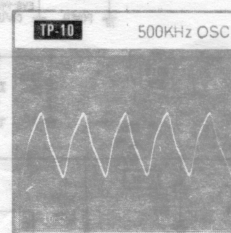
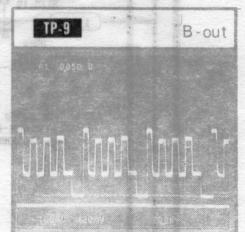
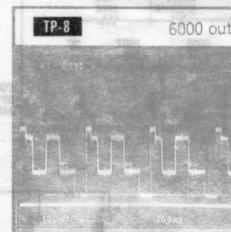
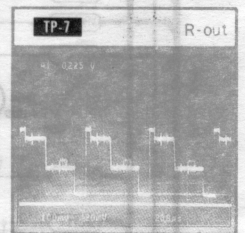
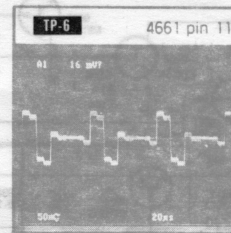
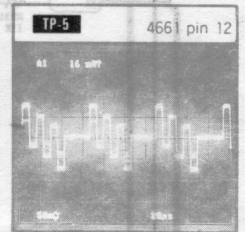
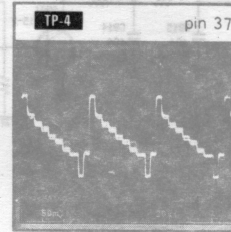
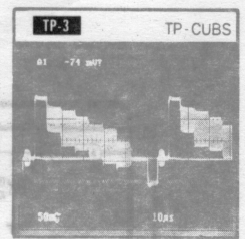
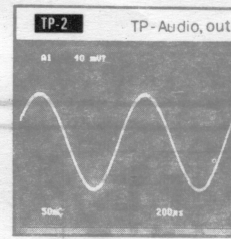
CB MODEL: WITHOUT

INCH OPTION

LOC.	INCH	14 INCH	16 INCH	20 INCH	21 INCH
R258	DELETE	DELETE	1/BW 220K	1/BW 220K	
R209	1/BW 2.4K	1/BW 2.4K	1/BW 10K	1/BW 10K	
R215	1/BW 5.1K	1/BW 5.6K	1/BW 5.6K	1/BW 5.6K	
C241	50V 221	50V 221	DELETE	DELETE	
C204	DELETE	DELETE	CH 47PF	CH 47PF	
C243	DELETE	DELETE	50V 10uF	50V 10uF	
HC201	DELETE	DELETE	VLT 104	VLT 104	

CF MODEL OPTION

LOCATION	BASIC MODEL	CF MODEL
R259	1/BW 270K	1/BW 130K
C251	18V 272	18V 182
C222	C-ELEC. 50V 0.47uF	C-POLY 474
T201	AA25-1004D	AA25-1005C



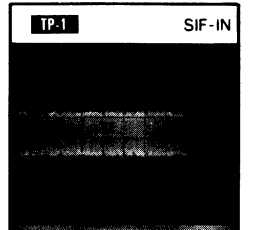
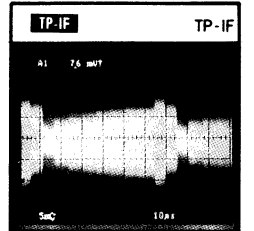
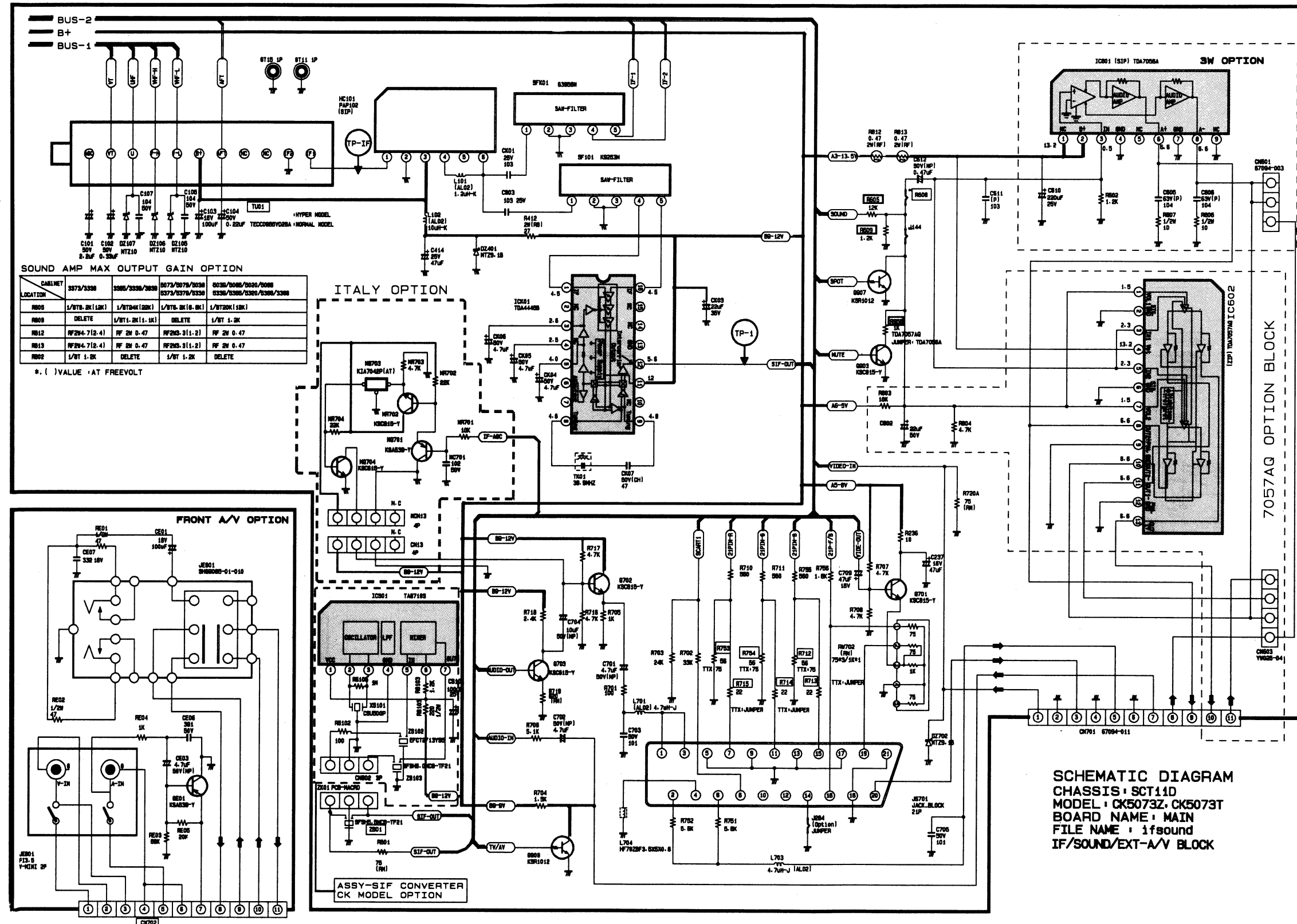
SCHEMATIC DIAGRAM
 CHASSIS: SCT11D
 MODEL: CK5073Z, CK5073T
 BOARD NAME: MAIN
 FILE NAME: onechip
 ONECHIP/CHROMA BLOCK

BUS-3

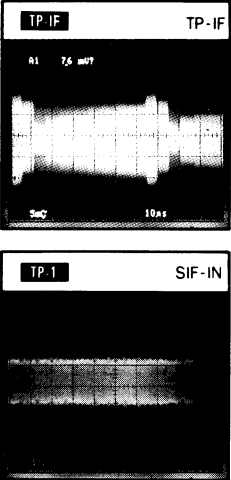
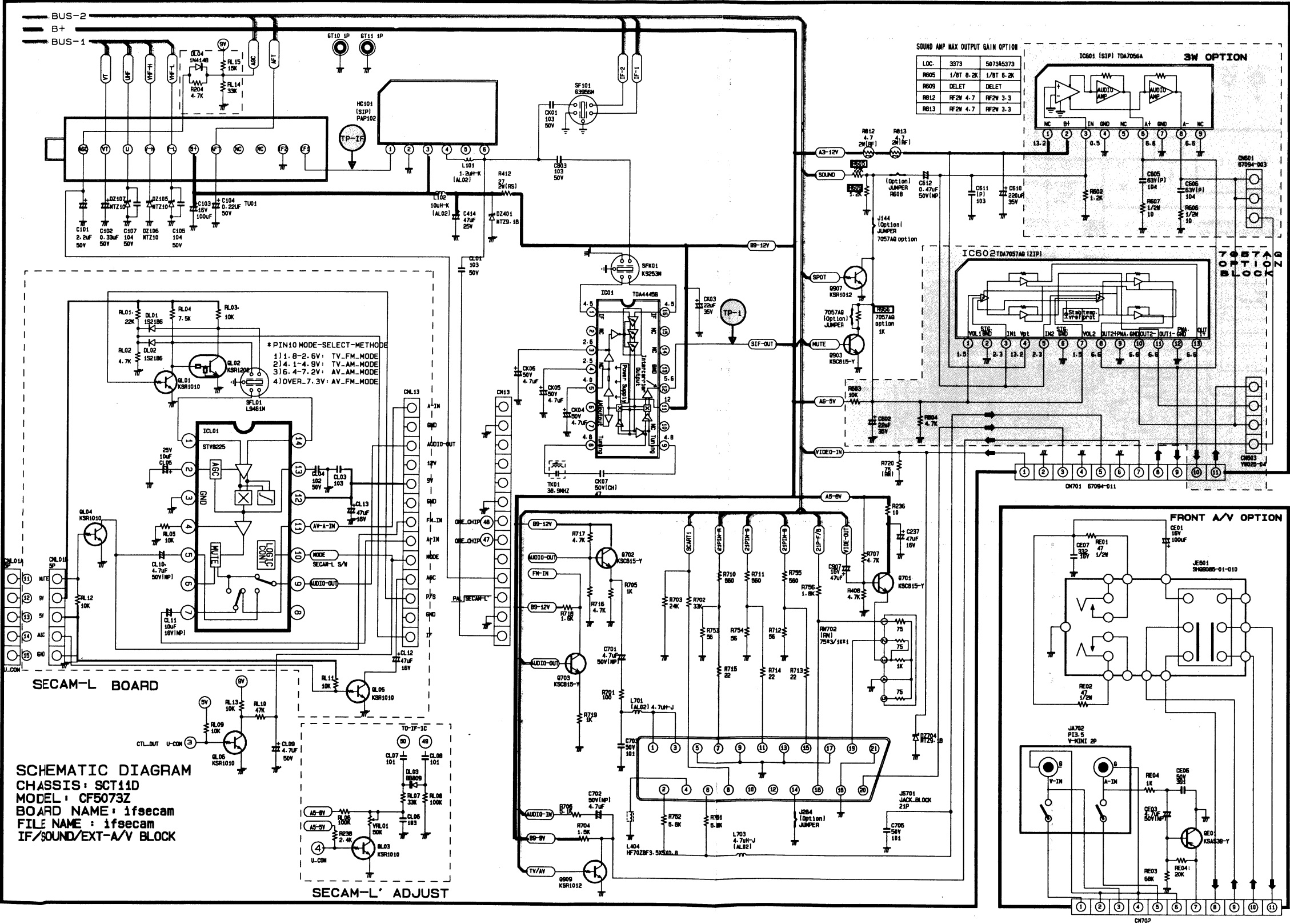
: Power Line

: Signal Line

11-3 IF/Sound, EXT-A/V Block



11-4 IF/Sound/EXT-A/V Block(ifsecam)



11-5. POWER/VERTICAL/HORIZONTAL/CRT

